Climate Smart City Strategy Vienna

Our way to becoming a model climate city

"Smart Climate City Wien" is the vision of a city where quality of life continues to be good, but not at the expense of the environment and thus of future generations. In its sustainability strategy, the City of Vienna commits to doing everything it can to achieve net zero by 2040. To this end, it has defined concrete targets for all spheres of life, from energy supply and mobility to health, education and digitalisation.

City of Vienna | Smart City

Being smart means taking smart action!

Consistent climate policy, a complete transition from fossil to renewable energy, responsible use of resources and a focus on sustainable behaviours – these all create new qualities that ensure the city remains a pleasant place to live.

The Smart Climate City Wien mission statement:

High **quality of life** for everyone in Vienna
through social and technical **innovation** in all areas,
while maximising conservation of **resources.**

The Smart Climate City Strategy sets out the City of Vienna's long-term goals for mitigating and adapting to climate change and transitioning to a circular economy. As the umbrella strategy for Vienna's climate action package, it defines the climate goals and provides the framework for the Vienna Climate Guide and emissions budget.

A headline goal of the Smart Climate City Strategy is that **Vienna will reduce its local greenhouse gas emissions by 55% by 2030 and achieve net zero from 2040.** Vienna's remaining carbon budget from 2021 onwards is set at a **maximum of 60 million tonnes of CO_2 equivalents.** The strategy also provides for the **reduction of Vienna's consumption-based material footprint** and local **per capita final energy consumption.** To ensure high **quality of life** for everyone, the goals also cover **social inclusion** and making the city a **great place for children and young people.** Last but not least, Vienna aspires to position itself as an **innovation leader** and **digitalisation capital** in Europe.

"Vienna is the first federal province to set itself the clear goal of achieving **net zero by 2040.** As we take action to deliver on that goal, we want to inspire the people of Vienna to get on board and support our endeavour. After all, Vienna can only achieve net zero if we all work together, and everyone in Vienna will benefit from living in a carbon-neutral, climate-proof model city!"

Ulli Sima

Ulli Sima, Executive City Councillor for Innovation, Urban Planning and Mobility

Smart Climate City needs everyone on board

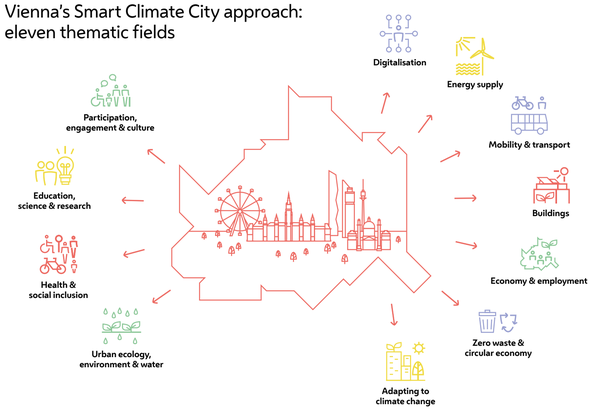
Smart Climate City Wien relies on the engagement and initiative of the Viennese public. The project thrives when as many people as possible actively buy into it as individuals – by contributing their experience and creative ability, joining discussion processes, developing and implementing innovative projects, and through responsible consumer behaviour and mobility choices.

QR code
Smart Climate City Strategy
https://smartcity.wien.gv.at/en/strategy/

The 17 Sustainable Development Goals

The Vienna Smart Climate City Strategy is based on all 17 Sustainable Development Goals (SDGs) set out in the UN 2030 Agenda.

Vienna's Smart Climate City approach: eleven thematic fields



Participation, engagement & culture

"Living labs" are created at neighbourhood level to pilot **innovative new methods** and processes and build **networks** of local stakeholders.

The City of Vienna supports projects that actively encourage **cultural participation** – from plain-language and multilingual outreach activities to a wide range of **free** events.

The City of Vienna continuously works on its **participation** standards in partnership with local people, and overall levels of public participation and engagement **increase.**

All social groups are empowered to play an **active role** in the **co-creation** and transformation of the city.

The opportunities for public participation offered by the City of Vienna are **visible** and accessible to all.

Vienna develops and employs various **tools to give the public a say** in budgeting and use of public funds.

Digitalisation

By 2030, all processes and services of the City of Vienna that are of relevance to the public are digitalised and **fully automated** wherever possible.

Vienna has a needs-based and resilient **digital infrastructure** designed to operate with maximum resource efficiency.

By 2030,
75%
of the **energy requirement** for digital services and infrastructures of the City of Vienna and its municipal enterprises will be covered by **renewables**, rising to 100% by 2040.

The City of Vienna creates an **excellent pool of data** and utilises this for decision-making and management purposes, as well as making it publicly accessible ("open government data").

The City of Vienna is a pioneer in the field of **digital participation** and uses digital tools to create transparency and promote active democracy and public involvement in decision-making.

The City of Vienna prioritises digital **human rights** and promotes digital literacy.

Energy supply

By 2030 half, and by 2040 100% of Vienna's final **energy consumption** will originate from **renewable** or **carbon-free** sources.[1]

Our heat supply will be 100% **fossil free by 2040.**

Renewable and **carbon-free energy production** in Vienna increases threefold by 2030 and sixfold by 2040, compared to 2005 levels.[2]

Vienna's energy grids allow for a **decentralised, renewables-based energy supply.**

Mobility & transport

The volume of traffic crossing the municipal boundaries falls by
50%
by 2030.[3]

Per capita CO_2 emissions in the transport sector fall by
50% **by 2030**
and 100% by 2040.[4]

Non-fossil-powered vehicles as a share of new vehicle registrations rises to
100%
by 2030.[5]

Vienna promotes and realises the concept of the **15-minute city** – with short distances to services and amenities, lively, mixed-use neighbourhoods and **redesign** of streets to provide more space for active mobility options, public transport and pleasant places to linger.

The share of journeys in Vienna made by **eco-friendly modes of transport**, including shared mobility options, rises to
85% **by 2030**
and to well **over 85% by 2050.**[6]

Mobility guarantee: It's easy to **get around** in Vienna **without owning a car.**

Per capita final energy consumption in the transport sector falls by
40% **by 2030**
and 70% by 2040.[7]

Commercial traffic within the municipal boundaries is largely **CO_2 free** by 2030.

Private motor vehicle ownership falls to
250
vehicles per 1,000 inhabitants by 2030, and the amount of parking available in public spaces is gradually reduced.

Buildings

Buildings are used to generate as much **solar power** as possible.

Circular planning and construction to maximise conservation of resources is standard from 2030 in newbuild and refurbishment projects.

Per capita final energy consumption for heating, cooling and hot water in buildings falls by
20% **by 2030**
and 30% by 2040.[8]

The associated per capita CO_2 emissions fall by
55% **by 2030**
and to **zero** by 2040.[9]

Vienna continues to provide an adequate supply of high-quality **subsidised housing** to reduce the percentage of people who are overburdened by housing costs.

Greening, shading and **passive cooling** of buildings are standard; active cooling systems are powered by renewables.

Developers' competitions in the **subsidised housing** sector drive social **innovations** and new solutions for mitigating and adapting to climate change – especially greening measures.

By 2040, at least
70%
of the building components, products and materials recovered from demolitions and major refurbishment projects are reused.

Economy & employment

The **City of Vienna champions** a sustainable urban economy by introducing appropriate legal frameworks and targeted subsidy schemes, by creating "living labs", and as a public-sector client.

The City of Vienna and Viennese businesses establish a **climate action alliance** for the joint development of a sustainable urban economy.

The incomes and **job satisfaction** of Viennese citizens constantly increase, while social inequality declines.

Products **manufactured in Vienna** are durable, easily reparable, reusable and recyclable, and their production processes are largely waste and pollutant free.

In 2030, Vienna has a **global** reputation as the hub of a resource-efficient circular economy and attracts investment and talent in this sector.

The productivity of Vienna's urban economy constantly increases, underpinning the city's **prosperity**, **resource efficiency** and **competitiveness.**

The material efficiency of the Viennese economy increases by
30% **by 2030**
and a further 10% by 2040.[10]

Adapting to climate change

Greening measures, shading features and other installations in the public space substantially reduce the (perceived) ambient temperature in summer and provide the backdrop for vibrant, **climate-proof neighbourhoods.**

To mitigate and protect against summer overheating, **green** and **open spaces** are newly created and existing ones expanded and structurally upgraded to improve the urban microclimate.

All planned buildings and urban developments in Vienna are assessed in terms of their contribution to **adapting** to **climate change** and optimised where necessary.

All citizens of Vienna have access to **high-quality green space** within a radius of 250 metres.

In Vienna, as much **rainwater** as possible is fed back into the local natural or near-natural **water cycle.**

Greening of buildings improves the urban **microclimate**, especially in densely built-up areas.

In new urban development zones, provision is made for **high-quality green public spaces** at an early stage of the planning and design process.

Urban ecology, environment & water

The city's **food supply** is largely sourced from the city itself and the surrounding region, preferably from organic producers supplemented by urban agriculture.

Vienna's **water supply** and waste water management infrastructure is maintained and operated to a high standard and in a resource-efficient manner.

The **natural functions of the soil** are maintained through preservation of existing **unsealed** surfaces and creation of new ones.

In the interests of people's health and well-being, **air**, **water** and **soil pollution**, **noise** and **heat pollution** and **light pollution** are all **minimised** as far as possible.

Vienna **promotes biodiversity.**

The share of green space in Vienna is safeguarded for the long term at over **50%.**

Vienna creates additional new woodlands and green spaces as **recreation areas** for its growing population and to **improve** the **urban microclimate.**

Zero waste & circular economy

Less waste is produced thanks to a wide range of waste prevention measures.

Food waste is cut by
50%
by 2030 and reduced to a permanent minimum by 2050.

Vienna's waste management system achieves **net zero** by
2040.

Vienna **exceeds** the EU target of a
60%
recycling rate by 2030.

By 2050,
100%
of Vienna's non-avoidable waste is **recycled.**

Health & social inclusion

Vienna supports **healthy, active ageing** – care-dependent Viennese citizens receive high-quality care at home or close to home for as long as possible.

Health literacy is improved at individual and organisational level – Vienna focuses on **health promotion and disease prevention.**

Vienna offers high **quality of life in all districts of the city** – by investing in public infrastructure and mitigating & adapting to climate change, strengthening community cohesion and providing a wide range of opportunities for public involvement and participatory decision-making.

The **decarbonisation** of Vienna's **healthcare sector** is accelerated by prioritising measures to improve energy efficiency and conserve resources.

By
2030
the healthy life expectancy of the Viennese population has increased by **two years.**[11]

Vienna is a **diverse city** that promotes **gender equality** and opportunities for participation for all who live here.

All social groups, especially vulnerable ones, are **protected** against the health risks associated with climate change.

Education, science & research

In Vienna, specific challenges relating to **sustainable development** are identified and resolved cooperatively by the municipal administration, higher education and research institutions, companies and end users.

Education and qualification programmes cater for changed **occupational profiles** to foster new smart **technologies** and practices and support career choices that break with traditional gender roles.

The city-wide roll-out of **learning communities** ("Bildungsgrätzln") by 2030 and the subsequent evolution into a Learning City will create learning spaces that are tailored to local neighbourhoods, communities and lifestyles – supported by multiple use of buildings and spaces.

International congresses, trade fairs and events increase the **global visibility** of Vienna's research excellence.

Vienna initiates large- scale mission-led **research and innovation projects** as a contribution to the **socio-ecological** transformation.

Vienna boasts a comprehensive, needs-based, inclusive programme of **digital education** for all sectors of the population.

Raising **awareness** of **sustainable**, resource-efficient development is a standard **teaching objective** in all educational institutions.

In 2030, Vienna is one of **Europe's top five research** and **innovation hubs** and a magnet for top-flight international researchers and the research units of international corporations.

[1] Including any utilisation of geothermal energy from the surrounding region. [2] Including any utilisation of geothermal energy from the surrounding region. [3] Baseline year 2021. [4] Baseline year 2005. [5] With the exception of special-purpose vehicles. [6] The wider definition of ecomobility encompasses walking, cycling and public transport plus shared-use schemes such as car sharing and car pools. [7] Baseline year 2005. [8] Compared to the average for the period 2005–2010. [9] Compared to the average for the period 2005–2010. [10] Baseline year 2019. [11] Baseline year 2019.

CREDITS AND PUBLISHING DETAILS Owner and publisher: Vienna City Administration; Editorial: City of Vienna, Municipal Department for Urban Development and Planning; Design & layout: The Gentlemen's Creative GmbH; English translation: Angela Parker; Print: Alliance, Bad Vöslau; climate-neutral production: © Vienna City Administration 2022

Buildings become sources of green power

- through solar energy installations on roofs and facades
- through efficient heating systems and state-of-the-art building materials and techniques that save and store energy
- with greened roofs and facades that improve air quality and mitigate traffic noise
- with greening measures that provide a habitat for bees and other insects

Streets become outdoor living-rooms

- with more space for walking and cycling
- through redesign and re-arrangement of public spaces
- with additional trees providing shade
- with more space for play, strolling and street festivals

Waste is a source of valuable raw materials

- through urban mining in the construction sector
- with products that are developed in line with the principles of the circular economy – durable, reparable, reusable and recyclable
- with waste management systems that focus on waste avoidance, recycling and utilisation of waste heat from thermal waste processing

Vienna's expertise is an international bestseller

- when it comes to developing and implementing new technologies and solutions
- in piloting new forms of participatory policy-making, co-creation and open innovation
- through targeted education options, new occupational profiles and smart jobs

More Viennese hold an annual public transport season ticket than own their own car, and the figure continues to rise.

Vienna is also one of the first cities in Europe to develop a dedicated strategy for the use of artificial intelligence (AI) within its remit.

Retrofitting and system upgrades in existing buildings can reduce energy consumption and thus carbon emissions by around two-thirds.

100% of Vienna's residual waste is recycled in thermal waste-to-energy plants, supplying district heating for 214,000 Viennese households and electricity for 95,000.

Climate Smart City Strategy Vienna

The Neighbourhood Oasis initiative allows everyone in Vienna to realise their ideas for better quality of life close to home. More than 595 projects have been implemented since 2015.

Half of Vienna's urban area is still given over to green spaces – despite the fact that the city's population has grown by 420,000 in the past 30 years.

By 2040, 100% of the energy requirement for digital services will be covered by renewables.

The planned expansion of photovoltaic systems will increase solar electricity production in Vienna 16-fold by 2030.

Vienna runs on clean energy

- by recovering energy from sewage sludge and every single time a train brakes on the underground network
- by using the "waste" heat constantly generated by production or data storage facilities to power local heating and cooling networks
- by heating buildings and water using solar energy, or heat pumps and district heating systems powered by geothermal energy from up to 3000 metres below ground

Urban neighbourhoods are a microcosm

- with all local services and amenities within walking distance
- thanks to a green infrastructure of shady parks and green spaces on the doorstep and climate-proof redesign of local streets and squares
- with local networks of educational institutions
- with sports grounds and other outdoor spaces available for leisure activities outside opening hours

Vienna is a city of 1000 ideas & initiatives

- from new shared-use services to innovative mobility and housing options
- through introduction of participatory budgeting for climate mitigation and adaptation measures and child & youth projects
- with urban "cultural labs" to explore and pilot alternative approaches and concepts for the future

Digital data are an urban tool

- thanks to smart energy grids that reduce energy consumption and optimise networks of energy producers and consumers
- thanks to the development of a "digital twin", i.e. a complete digital replica of the city, incorporating data from a wide range of sources to flag up potentials for reducing carbon emissions
- with sensors, digital platforms and apps offering improved mobility options and facilitating smart traffic management