

Heidelberg's Path to a Climate-Neutral City

Heidelberg is considered a pioneer in climate protection. The city has already reduced its carbon dioxide emissions in the entire city area by around 30%. To achieve that, Heidelberg has invested several hundreds of millions of euros into renovating schools and other buildings, expanding the district heating grid, building a wood-burning power plant as well as an energy storage system, establishing subsidy programs for energy-saving measures and environmentally-friendly mobility, expanding the tramway and the infrastructure in Heidelberg's new passive house district Bahnstadt. According to a current study, the city's administration can reach climate neutrality by 2030 in its own area of responsibility, among others in schools, daycare centers, public pools and offices. For the entire city, the goal is achievable by 2040.

Bahnstadt: One of the Biggest Passive House Districts in the World

Heidelberg's Bahnstadt district is a climate protection project that serves as an international role model: The entire district follows a passive house construction standard, so that buildings only consume a fraction of the average energy demand. Heat is provided by a district heating system and generated from up to 100% renewable energies. Electricity is also generated from renewable energies, making the district one of the biggest CO₂ neutral residential areas in the world. The area will see the construction of a lively district for scientific, residential and commercial use. Currently, about 5,800 people live in roughly 3,200 apartments.

With its passive house target, the City of Heidelberg took over a leading role among Germany's municipalities. The same holds true internationally and receives recognition: Delegations of architects, politicians and city councils from the US, China and Japan have been visiting Heidelberg's Bahnstadt district regularly.

Low Energy Consumption of City Buildings

Under the motto "Think globally – act locally" the City of Heidelberg sets a good example. Compared to 1993, municipal buildings cut their energy consumption by a total of 63% thanks to different measures. 100% of the electricity for municipal estates comes from renewable energies.

Climate Protection in Heidelberg – Selected Success Stories and Milestones

Municipal climate protection measures are currently focused on the expansion of photovoltaic systems in the city area, energy efficient renovations of municipal and private buildings as well as the continued transition of Heidelberg's district heating system to renewable energies and exhaust heat – so far they make up 50% of the energy used. Investigations concerning other options to make district heating "green" by using geothermal heat and electric river heat pumps, which use the river water from the Neckar to generate district heating, are currently ongoing.

Subsidies for the use of bikes and cargo bikes as well as replacing buses with electric buses in addition to measures to adapt to climate change are further priorities. Already about 80% of

Heidelberg's inhabitants use bikes, buses or trains within the city, the highest percentage within Germany. Mayor Würzner is planning to strengthen environmentally friendly transport further, among others by gradually introducing a free public transport system for Heidelberg, expanding the tramway onto the college campus and building bike bridges as well as fast lanes.

Subsidy Program "Rational Energy Use" Including Photovoltaic System

Already in 1993, the City of Heidelberg subsidized energy-saving measures in buildings, like insulation of facades and roofs, refurbishment of windows as well as comfortable, reduced-energy buildings. 3,000 projects were subsidized in this context. Subsidies for photovoltaic systems are available since 2021.

Solar Energy Use with Photovoltaic Systems and Obligatory Photovoltaic Systems

Solar energy is the most important renewable energy source in the city's area and numerous municipal measures aim to expand it. Currently, Heidelberg's municipal utility, Stadtwerke Heidelberg, is heavily investing into the expansion of solar and wind power systems outside the city via the energy supplier Trianel. This alone provides green electricity for 13,000 households in Heidelberg or six out of ten apartments in the city. New buildings are required to have photovoltaic systems since early 2021.

EU Model City and Activity in Important City Networks

In April 2022, the European Union named Heidelberg as one of six German model cities among "100 climate-neutral and smart cities". The goal: The cities need to be climate neutral by 2030 and then share their experiences with other cities. Late in 2019 already, a comprehensive 30-point climate action plan was passed with a large majority in Heidelberg's City Council, and in the spring of 2019, Mayor Prof. Dr. Eckart Würzner declared a climate emergency to be able to act even more efficiently. By the end of the year, the climate protection road map will be extended and rules will be tightened.

The City of Heidelberg has previously been part of the federal government's "Masterplan 100% climate protection" and in 1992 the city was the first German metropolis to have a climate protection concept. Thanks to that, Heidelberg now enjoys a reputation as environmental capital with many network partners. Mayor Würzner is committed to climate protection also on an international level. He has been President of the Energy Cities network, a coalition of 5,000 European municipalities, for 15 years. Heidelberg is also part of the Covenant of Mayors and the cities' network C40.

Stadtwerke Heidelberg

Heidelberg's utility, Stadtwerke Heidelberg, supports the city in its ambitious climate protection plans. With its energy concept 2020/2023, it plans to put the energy turn-around into action locally, relying on innovative technology and a growing number of renewable energy sources. In the last years, a wood-burning power plant as well as several bio-methane and natural gas cogeneration units were established. Heidelberg's energy park in the district of Pfaffengrund will see the construction of a 55-meter heat storage tower that stores energy from wind and solar systems, as well as a vortex engine (innovative CHP). Fiber-optic cables, EV charging stations and intelligent street lighting will make Heidelberg fit for the future.