Heating in Austria: A Strategic Transition Toward Climate Neutrality

Heating represents a fundamental component of Austria's overall energy consumption, accounting for more than half of the country's final energy use. Despite growing environmental awareness, only about 40% of the energy used for heating currently comes from renewable sources. The country's heating infrastructure remains heavily reliant on fossil fuels, with approximately 1.2 million gas heating systems and around 700,000 oil heating systems in operation. In Vienna alone, there are an estimated 600,000 fossil-fuel-based heating systems, underscoring the urgency of the transition in densely populated urban centers.

Austria has committed to becoming climate neutral by 2040. To achieve this goal, a comprehensive heat transition strategy must be developed and implemented across all levels—ranging from individual buildings to entire cities and federal states. The transformation of the heating sector faces several pressing challenges. Among these are the need to decarbonize heating systems, the integration of electricity and heating infrastructures—also known as sector coupling—and the expansion of technologies such as geothermal energy and hydrogen storage solutions.

In support of this transition, the government has introduced a Renewable Heating Act that places a particular focus on new buildings. This legislation prohibits the installation of new fossil fuel heating systems and mandates that new constructions connect to certified district heating networks. To meet the legal definition of quality, these networks must have the technical capacity to fully heat the buildings, offer transparent or regulated pricing structures, and derive at least 80% of their energy from renewable sources, waste heat, or combined heat and power plants. If the 80% threshold is not yet reached, a binding plan must be in place to achieve it by 2035.

Efforts are also underway to modernize existing buildings. Financial incentives have played a central role in promoting the replacement of fossil fuel systems. Until recently, a renovation bonus program covered up to 75% of the cost of such upgrades. However, this program exhausted its budget by the end of last year. New funding initiatives are expected to be introduced by the end of 2025 or the beginning of 2026 to support ongoing efforts.

Simultaneously, Austria is investing in the decarbonization of district heating systems and the expansion of local heating grids. This infrastructure development includes the integration of renewable energy and industrial waste heat. These measures are considered vital to replacing the roughly two million fossil-based heating systems still in use across the country.

To support these structural and technological changes, Austria has launched a nationwide education and communication initiative aimed at municipalities, companies, and households. This program is designed to disseminate best practices, share useful resources, and enhance understanding of the heat transition process among key stakeholders.

A number of existing programs are being continued or adapted. One such initiative promoting the use of waste heat—particularly for district heating applications—is now coordinated by three separate ministries instead of one, ensuring broader institutional support. The national focus is also expanding to include the electricity sector, reflecting the growing interdependence between heating and electric systems.

Thermal renovation of buildings remains a priority, especially in light of obligations under European Union directives such as the Energy Performance of Buildings Directive and the Energy Efficiency Directive. Even though the funding program for renovations has ended, efforts to refurbish and upgrade the energy performance of buildings will persist. Replacing fossil fuel boilers continues to be one of the key strategies in Austria's heating transition. Furthermore, spatial energy planning tools that were piloted in regions such as Vienna and Salzburg are now being rolled out at the national level, supported by public funding. These tools help map current energy demand and existing infrastructure, enabling more targeted interventions.

Legal and regulatory reforms are also advancing. Austria is in the process of developing a legal framework for phasing out the gas grid. This would allow segments of the network to be decommissioned when alternative energy supplies are technically and economically feasible. At the same time, there is growing pressure to improve transparency in energy pricing, particularly within heating markets. A national strategy for geothermal energy is also in development, aiming to overcome existing legal and regulatory barriers and increase both deep and shallow geothermal usage.

The federal structure of Austria's governance presents both opportunities and complications in managing the energy transition. While responsibilities for building regulations and heating policies lie primarily with the nine federal states, the federal ministry plays a coordinating role. It supports the harmonization of efforts across the regions through intergovernmental platforms, especially since the introduction of the Renewable Heating Act. Vienna, functioning both as a city and a federal state, has a unique dual role in this process. The federal government, although limited in direct authority, facilitates collaboration by offering funding mechanisms and ensuring compliance with national and European targets. This decentralized structure encourages a bottom-up dynamic in which federal states retain flexibility in implementation while receiving centralized support.

The phase-out of gas represents one of the most complex elements of Austria's energy transition. The process is ongoing but fraught with challenges, including resistance from the gas industry, legal constraints, and technical issues—particularly in multi-owner buildings where cost-sharing complicates decision-making. Draft legislation addressing gas phase-out was already in preparation before and during the Ukraine war. These drafts include requirements for existing buildings to switch from gas heating to alternatives such as district heating where available. The changing geopolitical context has also prompted gas system operators to reconsider long-term strategies. With the decline of Russian gas imports, there is growing interest within the industry to "optimize" the gas grid, aligning it with future energy needs.

Cultural and institutional changes are needed to shift away from Austria's historical reliance on cheap gas. Legal and political support at both municipal and national levels is essential to facilitate this transition. However, there is a positive precedent: the use of oil heating in Austria declined rapidly within a few years, offering a potential model for the ongoing gas phase-out.

Access to detailed energy data remains a limitation in Austria's planning capabilities. While Vienna's administration has access to building-level energy consumption data, this information is not publicly available due to privacy and administrative restrictions. The energy maps currently in use are based on a combination of actual consumption data from publicly funded applications and algorithmic modeling. These models extrapolate broader trends but do not provide individualized building assessments. Nevertheless, there is optimism that such data could become publicly accessible within the next five to ten years. At present, urban planning departments use this information internally to inform strategic decisions. Compared to other countries, Austria's approach to data transparency is mixed. In Italy, for example, some regions provide public access to Energy Performance Certificate databases, while others do not, highlighting an international inconsistency in energy data governance.

Austria's path toward a decarbonized heating sector is marked by strong commitments, policy innovation, and broad stakeholder involvement. While considerable challenges remain—from legal reforms and data accessibility to infrastructure upgrades and public engagement—the country has laid the groundwork for a significant transformation. The next decade will be decisive in determining whether Austria can fully realize its vision of a climate-neutral heating system by 2040.