

HEATED OUTDOOR DINING AREAS IN TIMES OF CLIMATE CHANGE

IN BRIEF

- Outdoor dining areas increase the physical space of restaurants and bars. The Austrian smoking ban further boosted their appeal. In addition, since the COVID-19 pandemic, outdoor dining areas have been regarded as safer spaces to avoid virus transmission compared with indoor dining.
- In winter, outdoor dining areas are often heated to increase comfort, which is associated with significant electricity consumption.
- In 2023, the City of Vienna approved permanent winter outdoor dining areas. At the same time, however, the City of Vienna is committed to ambitious climate goals. How can these objectives be reconciled?

WHAT IS IT ABOUT?

Electric patio heaters are frequently used to enable the use of outdoor dining areas when outside temperatures are low. In Vienna, patio heaters used in outdoor dining areas in public spaces require official authorisation. In 2024, 140 Viennese restaurants registered patio heaters. Assuming six patio heaters per restaurant and an operating period from November to March, this amounts to approximately 4,600 MWh of electricity consumption per season. If the patio heaters remain in operation beyond that period, electricity consumption is significantly higher. To put this into perspective, the outdoor heating used in Vienna consumes more energy per season than the photovoltaic system at Vienna's

Ernst-Happel-Stadion (football stadium), opened in 2025, can generate in a year (4,377 MWh). The installation of the system alone cost EUR 12 million of public money.

However, the need for a public discourse on the sustainability of patio heaters in public spaces stems not only from their high energy consumption. In the era of global warming, the use of additional outdoor heating during cooler weather appears fundamentally contradictory.



Patio heaters in Vienna on 8 May 2025, 10:13 a.m. (no guests).

Credits: ITA/Ulrike Bechtold

The ITA examined this topic from various perspectives, including those of citizens, restaurant owners, experts, representatives of the public administration, and politicians. Interviews addressed questions regarding environmental impact, fairness, regulation, and control of outdoor heating. The findings were discussed with representatives of the City of Vienna and experts in the context of climate change and Vienna's ambitious climate strategy.

BASIC DATA

Project title:	Heated Outdoor Dining Areas
Project team:	Bechtold, U.; Stauder, N.
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KEY RESULTS

The findings show that patio heaters in the restaurant sector are primarily perceived as a service for guests. However, they are also viewed as a competitive factor, following the logic of: “If others have them, I have to have them too.” In recent years, the number of gastronomic service providers that have received permits has remained relatively stable. But since permits are only mandatory for outdoor dining areas in public spaces, restaurants that do not occupy public space are not subject to any permit requirements. Moreover, neither markets nor food stalls are subject to this regulation.



Credits: ITA/Uirke Bechtold

Who has the right to comfort and profit, and who bears the costs?

The provision of renewable energy through publicly funded installations reveals an imbalance between the costs borne by the public for the construction and maintenance of energy infrastructure and the energy consumed by patio heaters in public spaces. At the same time, energy poverty has worsened significantly since the onset of the energy crisis in 2022, and the compatibility of patio heaters with Vienna’s ambitious climate roadmap, which charts a path toward a climate-neutral Vienna by 2040, remains questionable. Internationally, there are notable examples of regulations governing patio heaters (e.g., in Paris) or their energy sources (e.g., in Switzerland). In the context of the City of Vienna, the majority of the stakeholders involved also acknowledge the relevance of the issue. It is, however, not only about the total energy consumption but also about the problematic message conveyed by the use of patio heaters within a wider sustainability context.

Nevertheless, it remained unclear whether and how patio heaters could be regulated nationwide or at state level, and to what extent local municipalities have the legal authority to implement regulations. At district level, however, there is scope to approve or prohibit patio heaters on public property, as cases in Austria have shown.

WHAT TO DO?

The energy consumption associated with patio heaters is considerable, even though it is relatively low compared with total energy consumption in Vienna. In addition, it has high visibility and symbolic significance. The current situation should therefore be re-evaluated.

- Patio heaters are not sustainable. Even when powered exclusively by renewable energy, they consume a valuable form of energy, i.e. electricity, in full view of the public, including to meet competitive pressures in the restaurant industry.
- Growing energy poverty sheds an even more problematic light on this avoidable energy consumption.
- Climate protection goals must be incorporated into discussions amongst the various stakeholders through dedicated dialogue formats.
- If the City of Vienna aims to preserve its role as a role model in climate matters, phasing out or a general ban on patio heaters should be considered.
- General guidelines facilitate business decisions in favour of sustainable options, such as the provision of blankets or the use of exhaust air.
- Actively promoting, for example, “outdoor dining areas heated with 100% green electricity” could also have an educational effect.
- Political initiative is needed to raise awareness regarding climate-related issues.

FURTHER READING

Stauder, N. (2024). Heating and cooling of gastronomic outdoor spaces - what do people think? An observational case study in Vienna, Austria papers.ssrn.com/sol3/papers.cfm?abstract_id=5036614

CONTACT

Ulrike Bechtold

Email: tamail@oeaw.ac.at

Phone: +43 1 51581-6582

