Projects from the Energy pillar

The Alliiertenviertel "climate pioneer neighbourhood"

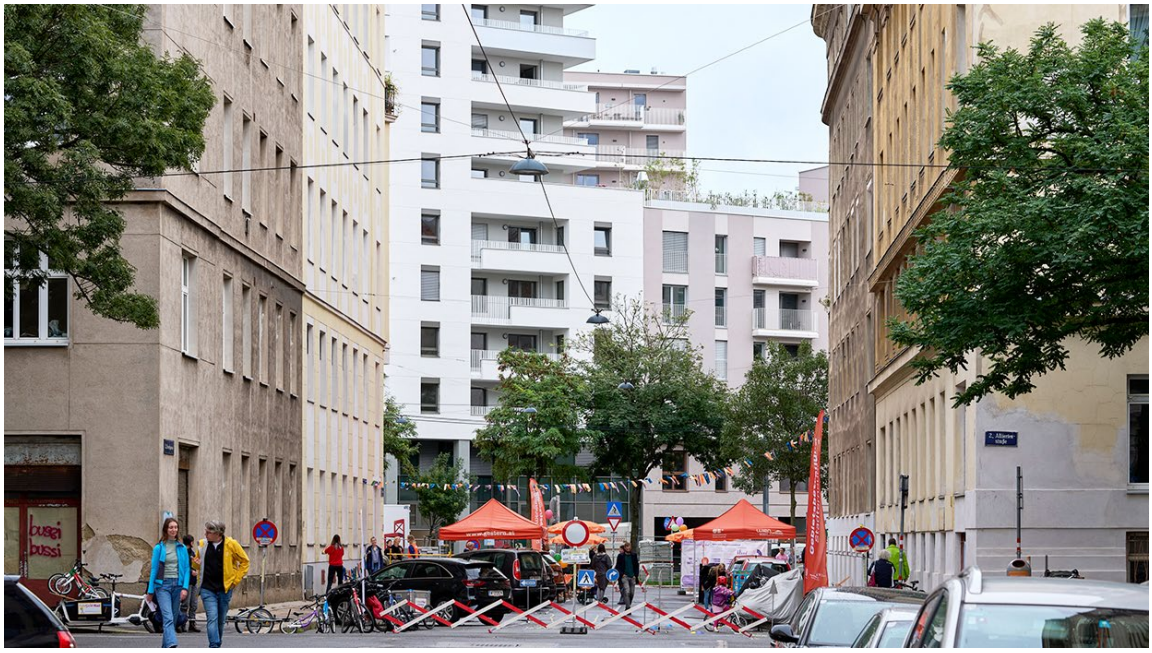

Figure 29: Street party in the Alliiertenviertel neighbourhood © City of Vienna/Markus Wache

WieNeu+ has been intensively involved in the Alliiertenviertel "climate pioneer neighbourhood" over the past few years and will continue to proactively support the regeneration process going forward. Supported by the Austria-wide Climate-neutral City Mission, the teams from WieNeu+ and its project partners – such as the Local Area Renewal

Office – provided local residents and property owners with ongoing information and advice on refurbishment, funding schemes, alternative energy sources and many other topics.

Find out more here: https://www.wien.gv.at/video/4693/Gemeinsam-machen-wir-das-Alliiertenviertel-zukunftsfit (German)

Jennifer Puchner on the Alliiertenviertel "climate pioneer neighbourhood"

> *"The special thing here is that we're preserving the existing built fabric and making it fit for the future. We're active on the ground in the Alliiertenviertel neighbourhood, for instance with outreach events about retrofitting of district heating networks, as well as refurbishment, greening and community-building projects. In 15 years' time, the Alliiertenviertel neighbourhood will be a thriving example of successful gentle urban renewal." (Jennifer Puchner, WieNeu+, City of Vienna – Municipal Department for Technical Urban Renewal)*

"*Working together for a future-fit Alliiertenviertel!*" was the motto as WieNeu+ and the Local Area Renewal Office initiated and organised numerous outreach events and workshops on the "Future-fit Alliiertenviertel" theme during the project's timeline.

Figure 30: Logo graphic of the Alliiertenviertel "climate pioneer neighbourhood" © City of Vienna

Events and consultations

9 outreach events in the Alliiertenviertel neighbourhood

1 street party

200 attendees at outreach events and street party

115 contacts established with property owners (buildings and individual flats), tenants and property management companies

34 consultations provided and contacts established by Hauskunft, Wohnfonds and WieNeu+
on district heating, switching to renewables, refurbishment, greening, etc.

50% of the buildings in the Alliiertenviertel neighbourhood have been reached to date

Neighbourhood facts & figures

Total area of neighbourhood approx. 9 ha

Built-up area approx. 3.5 ha

67 buildings

Approx. 1,800 dwelling units

Approx. 2,800 residents

762 property owners

Of which 40 sole owners

Existing building stock mainly from late 19th century

Energy supply

1 building connected to district heating grid

1,200 dwelling units with gas supply, 600 of which with gas cookers

Estimated solar potential approx. 800 kWp

1 public e-charging point

Figure 31: The Local Urban Renewal Office (GB) team (l. to r.): Julia Halbauer, Lena Diete and Nino Gamsjäger © City of Vienna/Bubu Dujmic*

"In the Alliiertenviertel climate pioneer neighbourhood we worked with WieNeu+ to get to know our neighbours even better, organising events, initiatives and shared projects on the ground to provide them with targeted support in their drive to build a climate-resilient, future-fit neighbourhood."

(Nino Gamsjäger, member of GB team, works for WieNeu+ on the Alliiertenviertel "climate pioneer neighbourhood" project)*

Building on change: working together for a sustainable future

Figure 32: Facade of the renovated building at Eberlgasse 3 in the 2nd district. district. © City of Vienna/Bojan Schnabl

Thermally insulated buildings are an essential step towards a climate- and future-proof neighbourhood. Insulated buildings consume significantly less energy, which in turn means that they also save costs.

A showcase project from the Alliiertenviertel neighbourhood is the late-19th-century residential building at Eberlgasse 3, the first in Vienna to be fully refurbished to passive energy standard.

Further showcase projects can be found on the website of the "*100 Projects Phasing Out Gas*" initiative.

Find out more here: https://www.wien.gv.at/umwelt/100-projekte-raus-aus-gas (German)

Vienna's "climate pioneer neighbourhoods" and "Phasing Out Gas"

Figure 33: Wien Energie local district heating substation © Wien Energie/Max Kropitz

One of the City of Vienna's future objectives is to achieve net zero (Vienna Smart Climate City Strategy, Climate Protection). Phasing out fossil fuels, in particular natural gas, plays an essential role in this. At present, over 600,000 households in Vienna still use natural gas for heating, cooking and hot water supply, which is why the City of Vienna launched its "Phasing Out Gas" programme. As part of the programme, four "pioneer neighbourhoods" have been designated for expansion of the district heating grid. These neighbourhoods are to provide initial takeaways and lessons for the future, while local residents and property owners receive special targeted support and funding. The four "pioneer neighbourhoods":

- Alliiertenviertel
- Gumpendorfer Straße
- Huber-Block
- Rossau

Expansion of the district heating grid in the Alliiertenviertel neighbourhood

Figure 34: On-site information: the Phasing Out Gas container, Am Tabor © City of Vienna/Bojan Schnabl

In a first phase, to equip the residents of the Alliiertenviertel neighbourhood for future access to a district heating supply, Wien Energie and Wiener Netze installed a primary district heating main together with a high-capacity underground substation. Since summer 2025, none of this has been visible on the surface. The square on Alliiertenstraße was redesigned, landscaped, and is now an amenity space with free public access.

Find out more here: Current timetable of works (Wien Energie) (546 KB PDF) (German)
Information about "pioneer neighbourhoods" and potential for connection to a district heating network (German)
How to apply for the City of Vienna's decarbonisation bonus (German)

"Climate-neutral Alliiertenviertel" study

Figure 35: Bird's-eye view of the Alliiertenviertel neighbourhood © City of Vienna

In 2025, on behalf of WieNeu+ (Municipal Department for Technical Urban Renewal), the FH Technikum Wien university of applied sciences carried out a study entitled "*Climate-neutral Alliiertenviertel*". The study explores possible scenarios for the phase-out of fossil fuels in the buildings sector.

Takeaways & challenges

- Following evaluation of the status quo and the maximum potentials ("maximum technical scenarios"), "realistic scenarios" show how many buildings actually have to be retrofitted to achieve the aim of reducing final energy consumption.
- The study shows that a shift from gas to district heating combined with thermal insulation of buildings can deliver significant reductions in greenhouse gas emissions. Vienna's climate target of reducing per capita final energy consumption for heating, cooling and hot water by 20% can be achieved with a thermal retrofitting rate of 2.5% – i.e. retrofitting of two buildings – per year.
- A complete phase-out of gas for heating would require conversion of the heating and hot water systems in 80% of the buildings, corresponding to an annual boiler replacement rate of approx. 5%.
- This means that everyone can make a significant contribution to the transition to clean energy while simultaneously seeing a long-term reduction in their own energy costs.

More about the "Climate-neutral Alliiertenviertel" study (German)

Project partners

- Wien Energie (municipal energy provider)
- Wiener Netze (municipal utility infrastructure)
- Local Area Renewal Office (GB*Mitte)
- wohnfonds_wien (Vienna Fund for Housing Construction and Urban Renewal)
- Urban Innovation Vienna (UIV) (climate and innovation agency of the City of Vienna)
- City of Vienna – Municipal Department for Energy Planning (MA 20)
- FH Technikum Wien (university of applied sciences)

Pioneers of the Alliiertenviertel neighbourhood

Figure 36: Climate pioneers of the Alliiertenviertel, (l. to r.) Corinna Gulder, Jeffrey Waldock, Kevin Waldock, Wolfgang Suchy © City of Vienna/Stephan Grundei

How can climate-proofing measures be rolled out in the neighbourhood? What projects can make the neighbourhood an even more pleasant place to live? The climate pioneers of the Alliiertenviertel show how it's done. See for yourself how our climate pioneers and their various projects are helping to make the Alliiertenviertel fit for the future. In 2025 we worked with the Municipal Department for Communication and Media (MA 53) to produce a video clip with voices from the Alliiertenviertel to inspire others to follow their example.

https://www.wien.gv.at/video/4692/Die-Klimapionierinnen-des-Alliiertenviertels (German)

Voices from the Alliiertenviertel (screenshot) © City of Vienna/MA 53

"WieNeu+ talks to property owners to discuss what options are available. They provide a huge amount of information in their outreach activities to get partners on board for shared projects." (Corinna Gulder, manager of a property in the Alliiertenviertel)

Figure 37: Change is only possible if you take people along with you. Climate pioneers of the Alliiertenviertel neighbourhood with Alexander Nikolai, CMDC 2 (6th from left), Deputy Mayor & ECC Kathrin Gaál (5th from right), Head of MA 25 Otto Eckl (4th from right) and Stephan Hartmann © City of Vienna/Stephan Grundei

Project partners

- Wien Energie (municipal energy provider)
- Wiener Netze (municipal utility infrastructure)
- Local Area Renewal Office (GB*Mitte)
- wohnfonds_wien (Vienna Fund for Housing Construction and Urban Renewal)
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Voices from the Alliiertenviertel (screenshot) © City of Vienna/MA 53

Miesbachgasse anergy network (Sozialbau)

Figure 38: Miesbachgasse 10 © City of Vienna/Christian Fürthner

The "*Miesbachgasse anergy network*" project by the WOHNBAU housing cooperative (part of the SOZIALBAU housing association group) demonstrates how heating systems in existing buildings can be decarbonised. The heating system in the flats dating from the 1960s was first converted from separate gas boilers to gas central heating, which was then successively replaced with a renewables-based supply. An air-to-water heat pump, solar panels and a buffer tank now supply the residential building with fossil-free energy.

However, the project is actually the starting point of a much larger vision: the development of a communal anergy network serving several properties and incorporating renewable energy sources such as groundwater or geothermal probes. This would not only replace fossil fuels, but also allow cooling of the buildings in the summer months.

Retrofitting of such a network in an existing built-up area is a technical as well as a legal challenge, though it does have a high level of scalability. Thanks to minimally invasive techniques – e.g. installing piping in disused chimney flues – the measures are cost-effective, socially responsible and accepted by tenants. As a showcase for Vienna's transition to clean energy, the Miesbachgasse project demonstrates how existing buildings in built-up urban areas can be retrofitted for a climate-neutral future.

Figure 39: Group tour of the loft installations in WOHNBAU's Miesbachgasse project. © City of Vienna/Markus Wache

Takeaways & challenges

- Existing buildings can be decarbonised – and it can be done using minimally invasive techniques.
- Centralised, system-based solutions allow flexibility: further renewable technologies – e.g. brine/water heat pumps – can be integrated at any time.
- Legal and organisational frameworks – esp. questions regarding billing of heating costs, ownership structures and how neighbouring properties are financed – are key obstacles in the development of an anergy network.
- The investment and installation costs of anergy networks need to be apportionable to tenants. However, according to an Austrian Supreme Court ruling (2022), the heating provider and the property owner may not be one and the same; a heating price can only be charged in the case of collective systems supplying multiple properties – otherwise only the operating costs.
- The project highlights the importance of a professional "heating network management" team with a combination of technical, economic and legal expertise. A successful roll-out requires stamina and skilful negotiation, as well as powerful, convincing arguments.
- The extensive preparation, moderation and planning work required must be done by an external coordinator and carried out in a financially viable manner.
- Funding schemes and political pressure to deliver are vitally important in order to actually get projects done; even with committed "facilitators" in place, the success rate to date remains low.

This project was supported with funding from the "Grätzlförderung" scheme.

Project partners

- WOHNBAU housing cooperative (part of the SOZIALBAU housing association group)

Find out more here: https://www.wien.gv.at/umwelt/vorzeigeprojekt-miesbachgasse (German)

Modernisation of building utilities: Ybbsstraße 6

Figure 40: Facade of Ybbsstraße 6 © Helmut Schöberl

The key task for the coming years is to find solutions for existing buildings and convert existing heating systems to a renewable energy supply. The enormous number of fossil-fuelled heating systems, in combination with a historic built fabric in which the outer shell of buildings and their technical installations are frequently of substandard quality, not to mention the architectural limitations, present a huge cluster of challenges when it comes to phasing out fossil fuels and achieving the climate targets.

This project tackles all the above issues.

This early-20th-century residential building on Ybbsstraße in Vienna's 2nd district is to become a showcase for innovative energy solutions in older buildings.

Built in 1908, the building comprises flats on five storeys and has a typical heating system of individual gas boilers.

Wherever appropriate insulation makes it technically feasible to do so, the existing gas heating boilers are to be successively replaced with a groundwater heat pump system.

Takeaways & challenges

- Analysis has shown that a heat pump solution without accompanying thermal insulation results in a largely electricity-based heating system, which does not fulfil the criteria for a renewables-based system. Furthermore, the electrical capacities required would entail substantial modification of the electrical wiring system. For this reason, an

economically and technically practical renewables-based heating and cooling system is only feasible if the heat energy requirement is reduced from 66 to around 30–40 kWh/m²a by the planned thermal insulation. Going forward, the new OIB Guideline introduced in 2025 will allow more reliable evaluations of suitability for low-temperature systems.

- Decision-making processes in commonhold associations usually require a great deal of time and consultation due to the clash of different interests and varying levels of information and awareness. The number of commonhold associations who decide to go ahead with retrofitting concepts is significantly lower than the figure for sole owners.
- Complex modernisation or energy retrofitting projects involving commonhold associations require continuous, neutral moderation or mediation, ideally in parallel with the project phases. Property management companies and engineering firms do not usually have the necessary moderation or conflict resolution expertise to successfully facilitate and manage this process.
- Investment decisions are often a source of anxiety and uncertainty. Clear, transparent communication is required to set out exactly what is being decided, what consequences result from that, and what the financial implications are.
- To ensure planning certainty, funding schemes should not end abruptly but be gradually adjusted over time. The possibility to combine regional government and neighbourhood-level subsidies could create additional incentives and facilitate project delivery.
- The subsidy schemes for retrofitting projects provide valuable support and create a solid basis for decision-making. The ideal scenario would be a combination of federal and regional government funding, which together would allow a total funding rate of 100% for retrofitting projects.
- WieNeu+ was crucially important to this project: without WieNeu+ it would never have got off the ground. The additional "Grätzlförderung" funding, in particular, was a decisive factor at the start.

This project was supported with funding from the "Grätzlförderung" scheme.

Project partners

- Hausverwaltung Obermeier GmbH (property management company)
- Schöberl & Pöll GmbH (structural engineers)

Anergy network start-up cells – ÖGUT

Figure 41: Outreach event on anergy networks at the Municipal District Office for the 20th District, 2024. © City of Vienna/Bojan Schnabl

The Austrian Society for Environment and Technology (ÖGUT) assessed nine blocks of residential buildings with regard to their suitability for the installation of anergy networks. Anergy networks are an innovative alternative which to date have only been road-tested in a few isolated cases in Vienna. They involve multiple buildings sharing heat harvested from ambient environmental sources, i.e. low-temperature thermal energy from the ground, groundwater or the surrounding air. This energy is then warmed or cooled to the required temperature using heat pumps.

Where individual solutions are technically difficult to implement due to lack of space, anergy networks serving multiple properties are a good and viable alternative. Their major advantage lies in the use of thermal energy at constant temperatures from the ground, groundwater or the surrounding air. This ensures a particularly efficient energy supply, both in hot summers as well as in very cold winters.

To start with, eleven potential start-up cells were identified within the programme area and evaluated in a multi-phase process. Decisive criteria included distance from the existing district heating grid and the structural and legal status quo. After close consultation with property owners and other stakeholders, three blocks of residential buildings were selected on account of their especially high potential:

- Kluckygasse,
- Gaußplatz South and
- Gaußplatz Northeast.

Alongside the technical analysis, the focus was on working with the property owners to successfully overcome obstacles such as majority decision-making, commonhold ownership structures and varying states of refurbishment. The project drafted recommendations for successful initiation and management of anergy network start-up cells and documented the findings as a set of guidelines for future projects.

Takeaways & challenges

- The Vienna Heating Plan clearly designates zones for expansion of the central district heating grid and zones for local, decentralised heating networks ("Local collective heating" category).
- Anergy projects are also eligible for subsidies, even in zones that can theoretically be connected to the central district heating grid, and this is an important incentive for innovative solutions.
- Long-term planning is crucially important: decarbonisation of existing buildings calls for timely conversion concepts aligned with construction cycles and energy demand patterns.
- External guidance from experienced consultants is crucially important, to provide property owners with professional advice and support from idea through to conclusion of the contract.
- Projects like this require a permanent "facilitator" of some kind, i.e. someone to provide ongoing moderation, network-building and support over a period of several years.
- Decision-making processes in commonhold associations are often protracted and subject to conflict. Without neutral external moderation or mediation, they frequently grind to a halt.
- The high level of information required at the start and the subsequent realisation of the need to take action often lead to a slump in motivation.
- A *"first mover advantage"* or staggered funding models could be used to reward those who act as start-up cells.
- Property management companies are key actors: however, they must be specifically contracted to perform these tasks as they are not part of their usual administrative remit. Educational sessions and outreach events – e.g. by ÖVI (property sector training institute) or Hauskunft (the City of Vienna's renovation advice centre) – are important kick-off activities.
- Model solutions, practical guides and/or recommendations – e.g. a practice-based "10 Step Plan" for anergy network projects – could go a long way towards eliminating the initial hurdles.

This project was supported with funding from the "Grätzlförderung" scheme.

Project partners

- Austrian Society for Environment and Technology (ÖGUT)

Alternative energy feasibility study: Castellezgasse 35-37, 1020 Vienna (commonhold association)

Figure 42: The residential buildings at Castellezgasse 35–37 © Schöberl & Pöll GmbH

The commonhold association of the residential buildings at Castellezgasse 35 and 37 (2nd district) commissioned Schöberl & Pöll GmbH to perform a feasibility study on converting the current gas-powered heating and hot water supply to a sustainable energy solution. The study analysed the use of a water/water heat pump based on thermal energy from groundwater.

The two buildings differ in terms of their age and structural details: Castellezgasse 35 (built 1884, thermal insulation retrofit 2010) and Castellezgasse 37 (newly built 2010) have a combined gross floor area of over 4,300 m². At present they have a decentralised heating and hot water supply via gas boilers in the individual flats.

The feasibility study shows that centralisation of the thermal distribution system is absolutely necessary. In future, thermal energy is to be generated and distributed from a new plant room in the basement. The funding eligibility criteria specify a maximum flow temperature of 40°C, so a hot water supply via additional booster heat pumps is envisaged. At the same time, the installation of rooftop photovoltaic panels is being considered to supply some of the electricity required by the heat pump and enhance the buildings' energy self-sufficiency.

Takeaways & challenges

- The heat supply in the existing buildings can be decarbonised, but requires centralisation of the thermal distribution system.

- Use of thermal energy from groundwater is technically feasible, but requires a detailed assessment of the geological situation and water legislation.
- The funding criteria (flow temperature max. 40°C) necessitate an adapted system concept incorporating booster heat pumps. (*Note: The funding criterion was amended as of 01/2024. The maximum flow temperature has now been increased to 55°C.*)
- The use of rooftop solar potential can significantly reduce operating costs and CO_2 emissions.
- The ownership structure (commonhold association) is a challenge: decisions require majority approval, but this makes implementation far more complicated.
- The question of funding: investment costs and subsidy options are crucially important for project implementation.

To date, solar panels have been installed on the flat roof. Further measures are currently being evaluated.

This project was supported with funding from the "Grätzlförderung" scheme.

Project partners

- Castelletzgasse 35 and 37 commonhold association
- Schöberl & Pöll GmbH (structural engineers)