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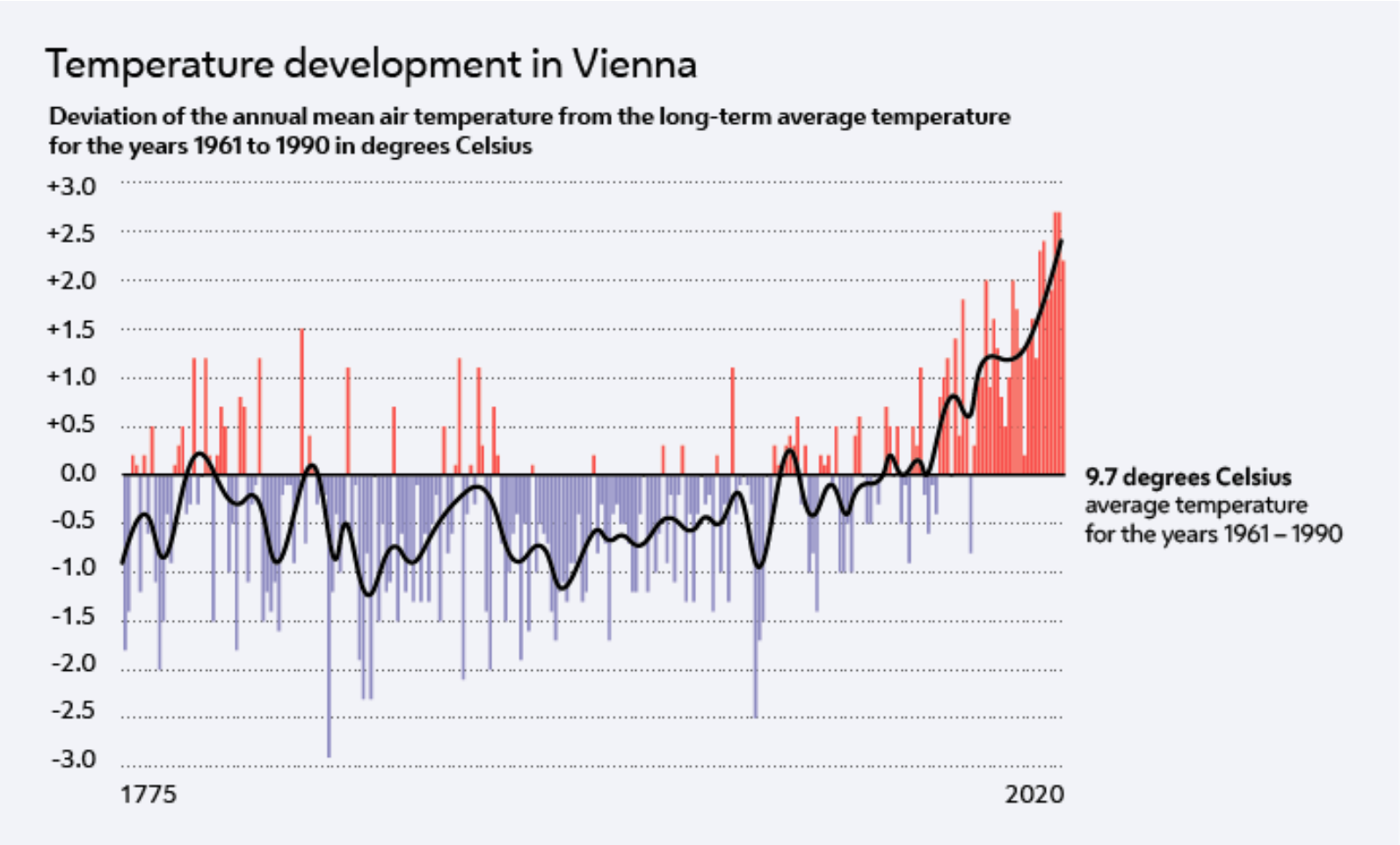
11 May 2022, Decarb Cities Forum

WIEN ENERGIE

How to decarbonise heating in Vienna by 2040

Jürgen Czernohorszky, Vienna Executive City Councillor for Climate, Environment, Democracy and Personnel
Michael Strebl, CEO Wien Energie

The mean temperature in Vienna is now more than 2°C above the long-term average



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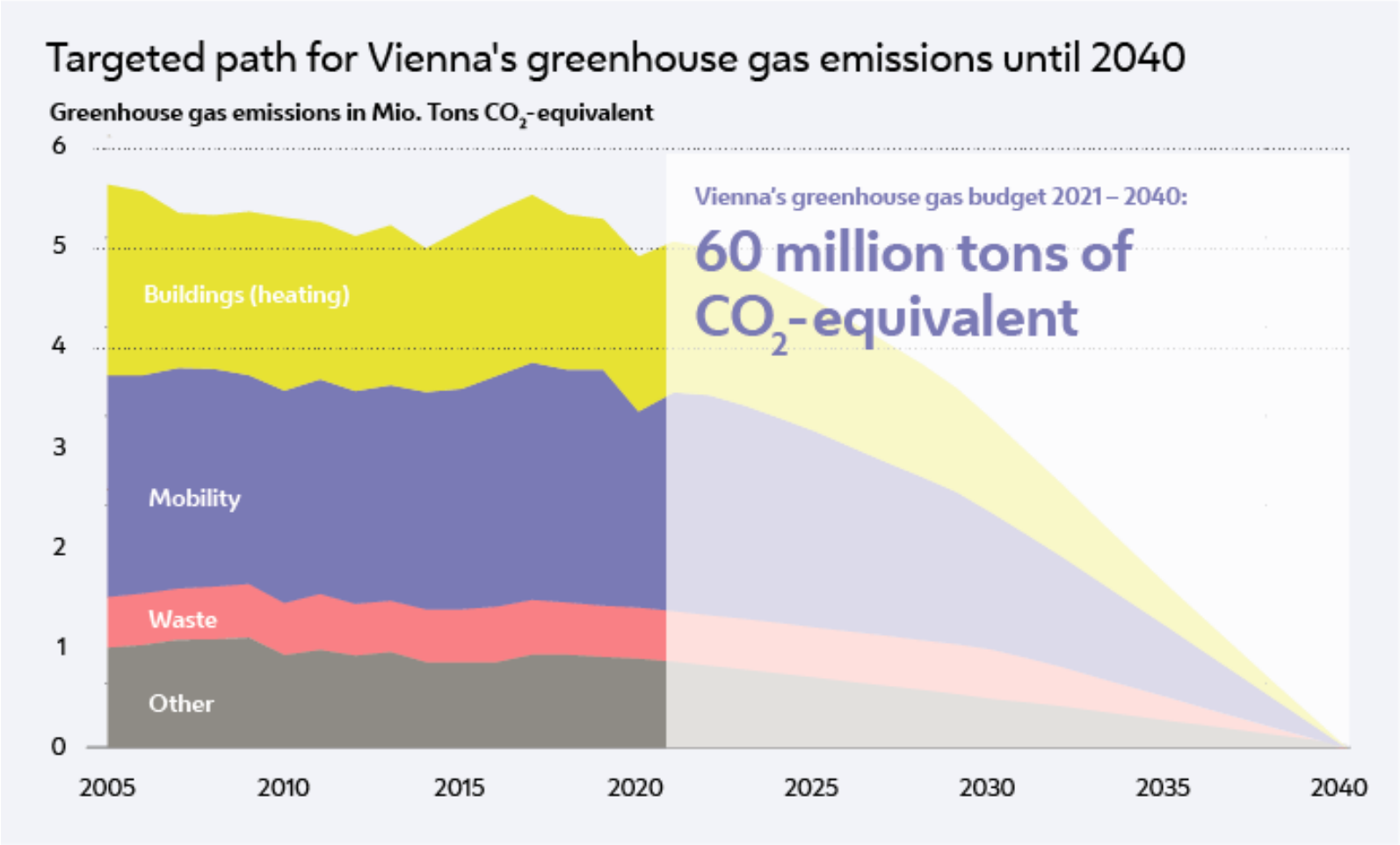
The Viennese Climate Roadmap foresees no more than 60 Mn t CO_2 emission to 2040



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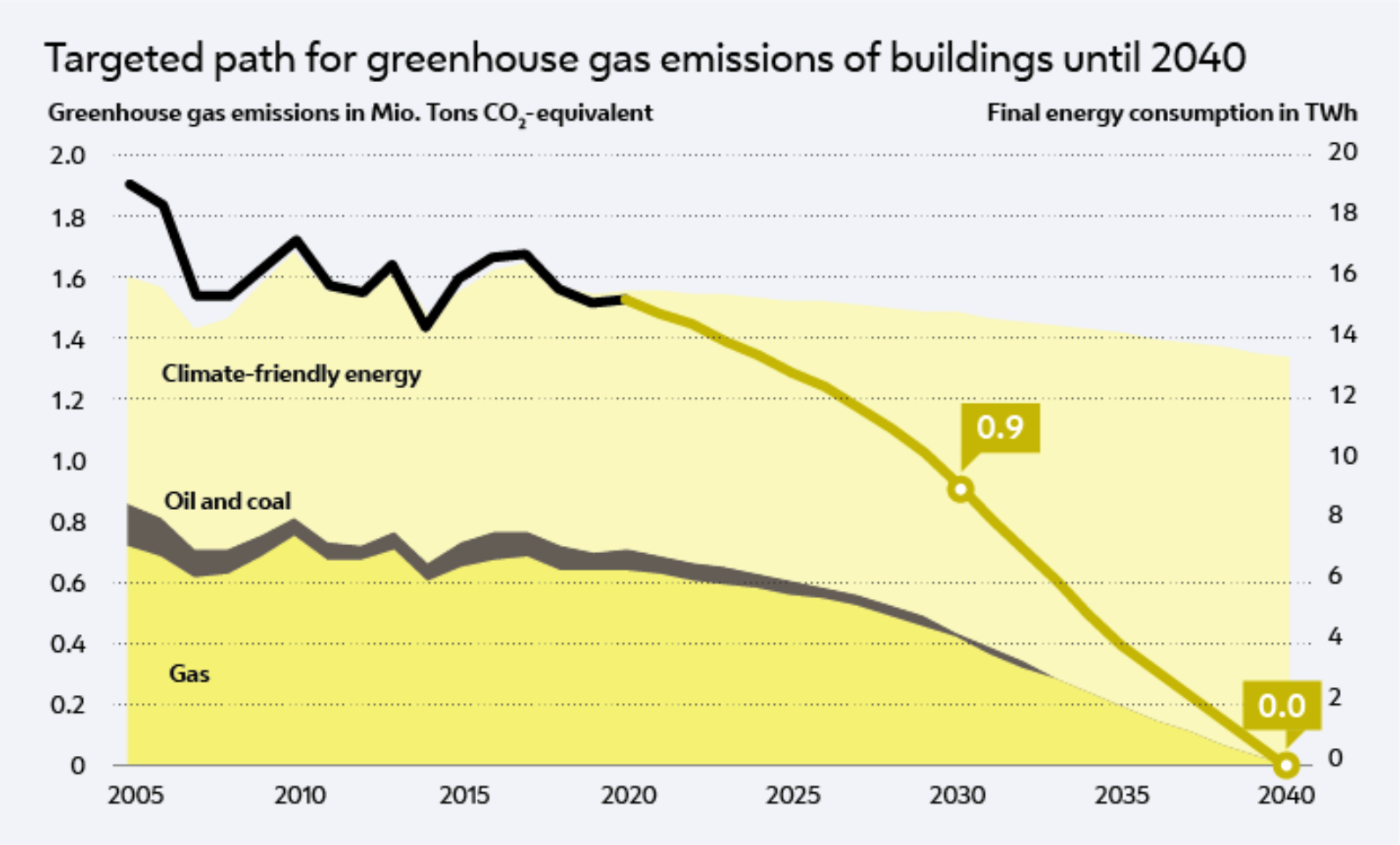
We are working on a detailed plan to decarbonize the building sector



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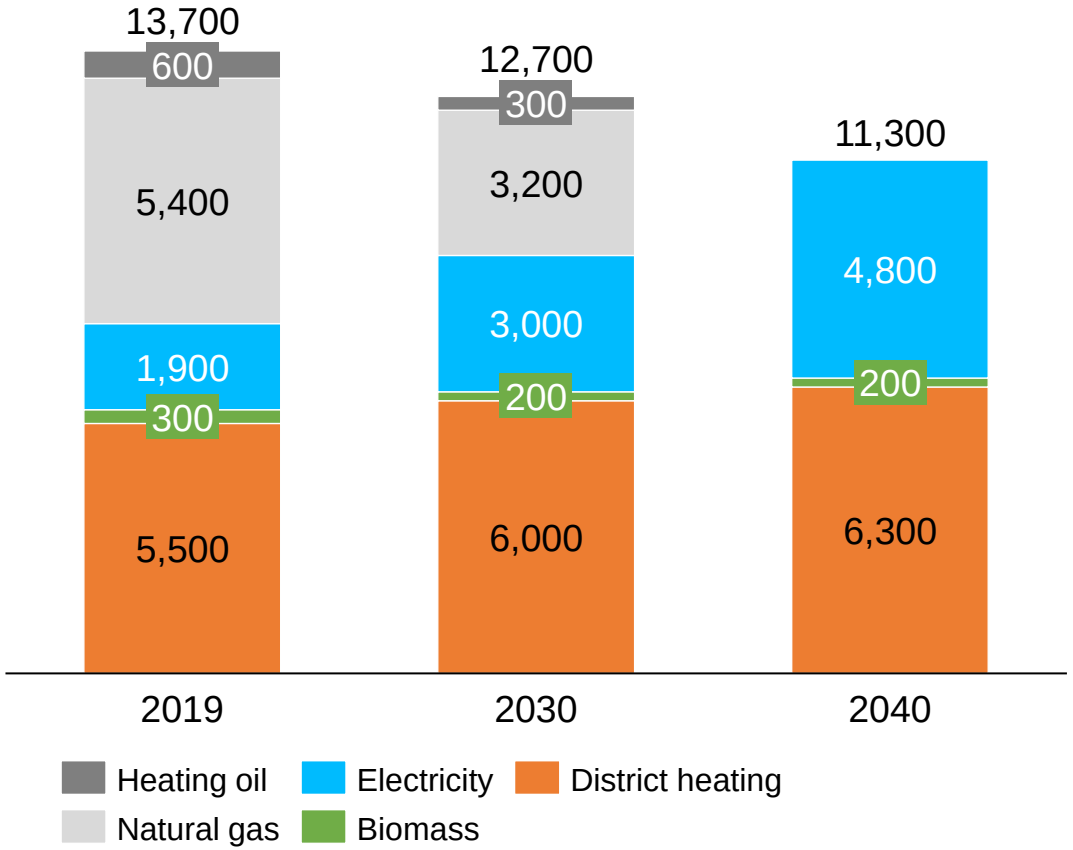
Our decarbonisation study shows that demand for useful energy decreases while natural gas is displaced

„Climate neutrality 2040“: Useful energy demand for heating [GWh]

(Values rounded to 100 GWh, sums above the rounded values do not always correspond to the rounded sum values)



- Population growth leads to increased demand
- The renovation rate and climate effects more than offset population growth
- Accordingly, useful energy demand for heating decreases by 18% by 2040

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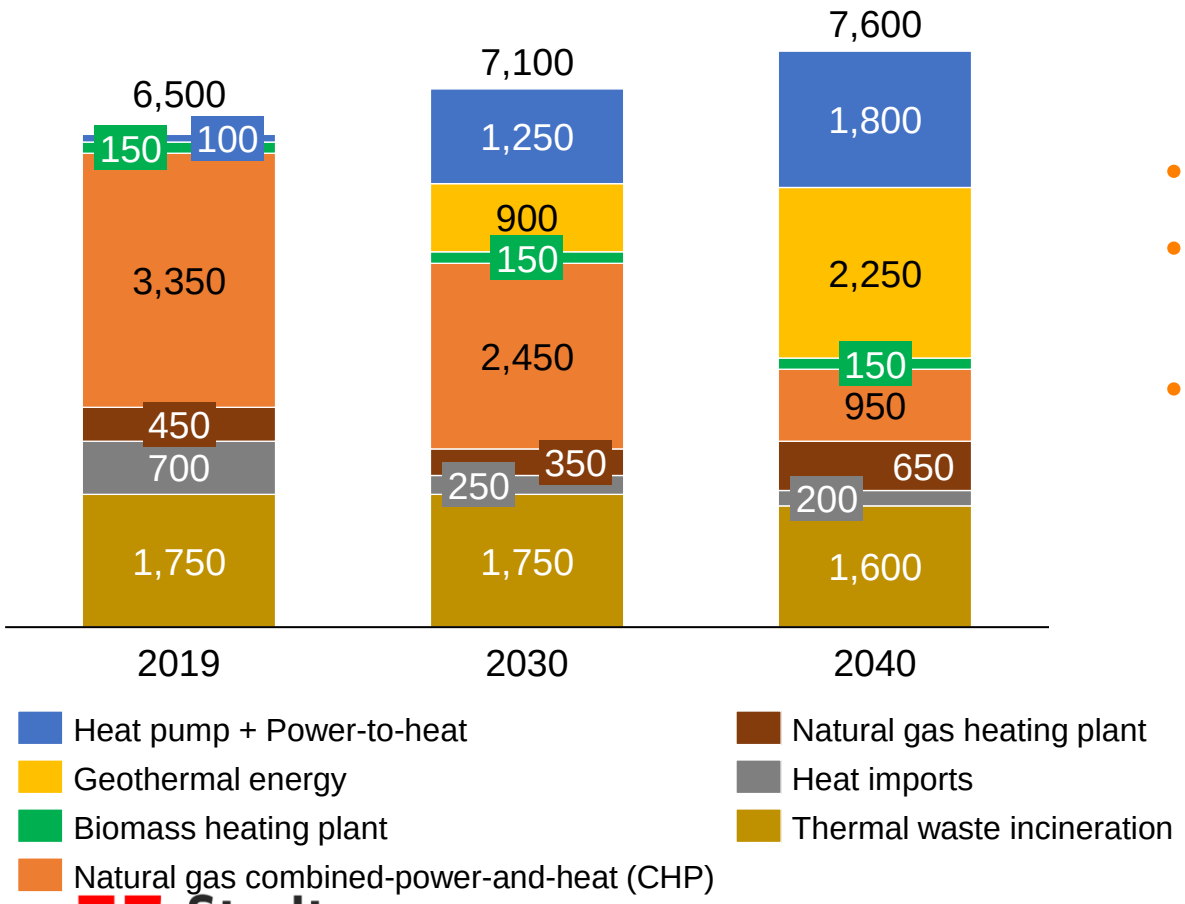
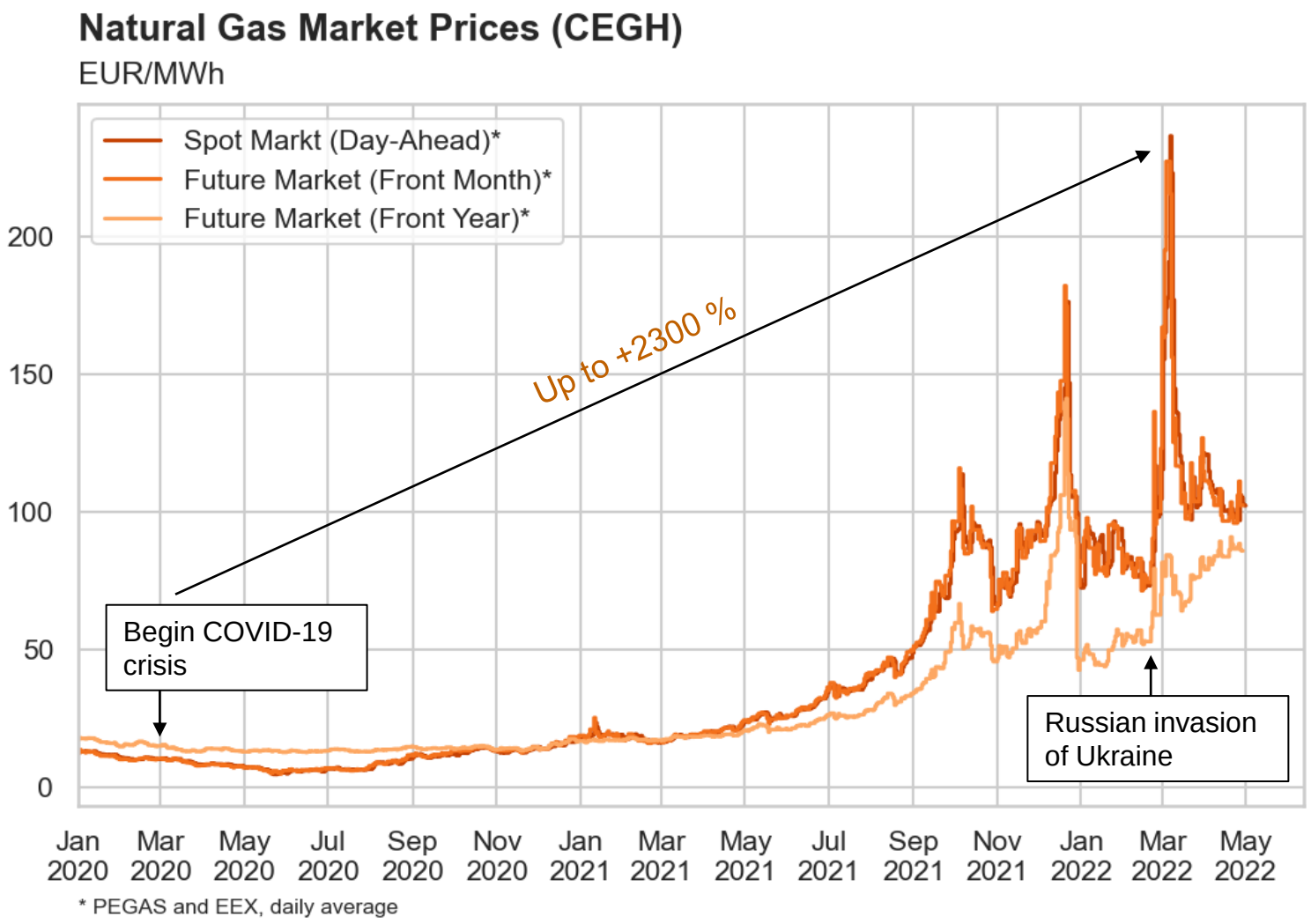
District heating is essential for achieving decarbonisation

„Climate neutrality 2040“: Generation of district heating [GWh]
(Values rounded to 50 GWh, sums above the rounded values do not always correspond to the rounded sum values)



- Generation increases by 18% by 2040
- In 2040, 56% of heat demand is covered by district heating
- Geothermal energy and large-scale heat pumps generate 55% of district heating by 2040

Recent price volatility emphasises the need to improve resilience via decarbonisation



- **Rising demand meets reduced supply**
- Post-COVID economy leads to higher demand for gas
- **Decreased supply:**
  - Non-commissioning of Nord Stream 2
  - Shortage of LNG gas (liquefied natural gas)
- **Gas storage** filled below average for the time of year
- **Russian invasion of Ukraine:**
  - High political uncertainty
  - Risk of a possible gas supply stop
  - Demand to be paid in rubles
- Panic buying of market participants

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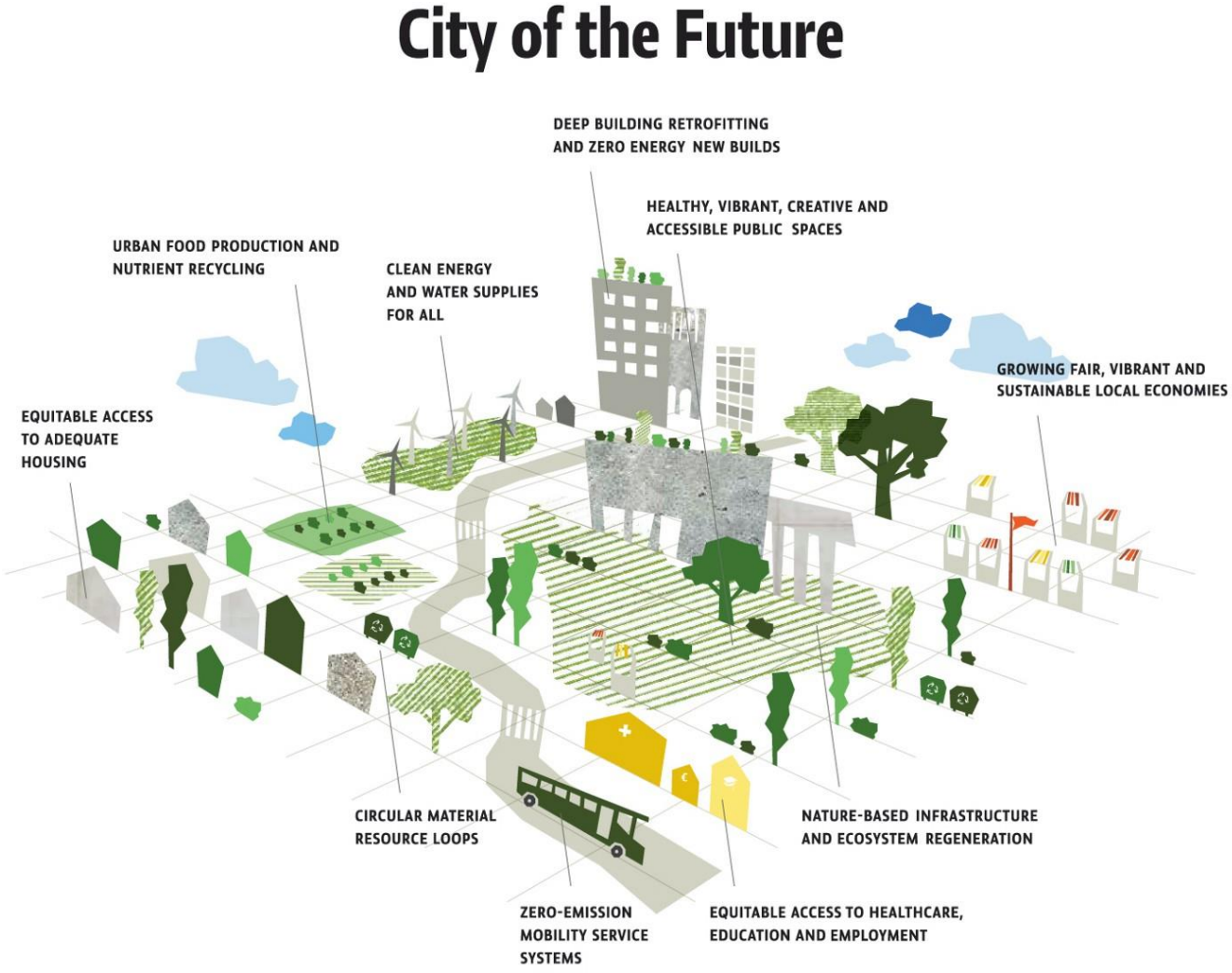
The Green New Deal for the City of the Future brings the different elements together



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SMART Block Geblergasse – a successful pilot project for renewable heating

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Under the Vienna Photovoltaic Program 800 MW will be installed by 2030

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Energy recovery turned Vienna‘s wastewater treatment plant energy positive

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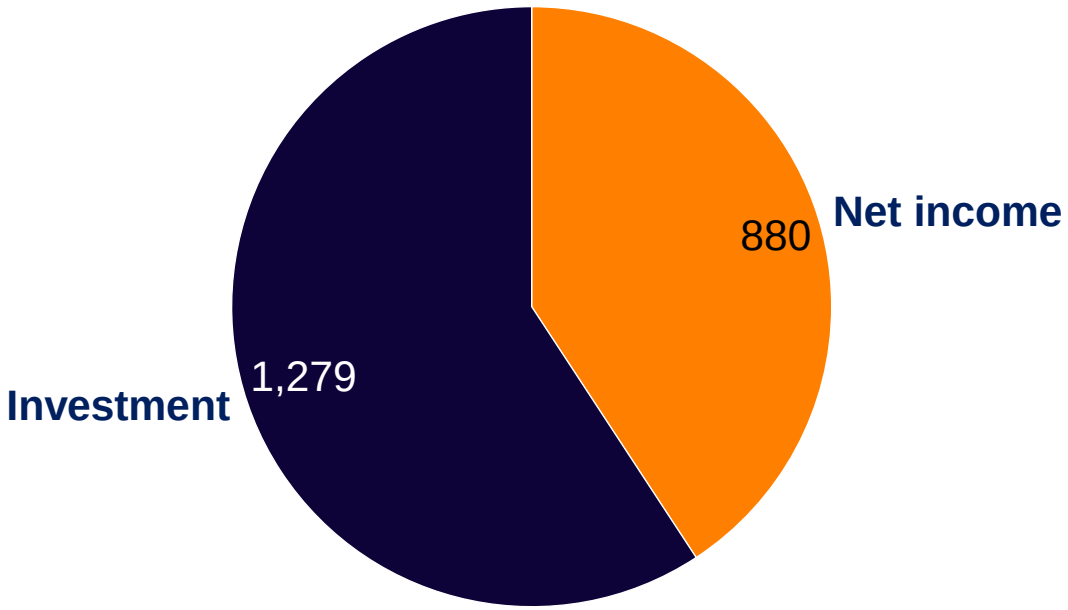
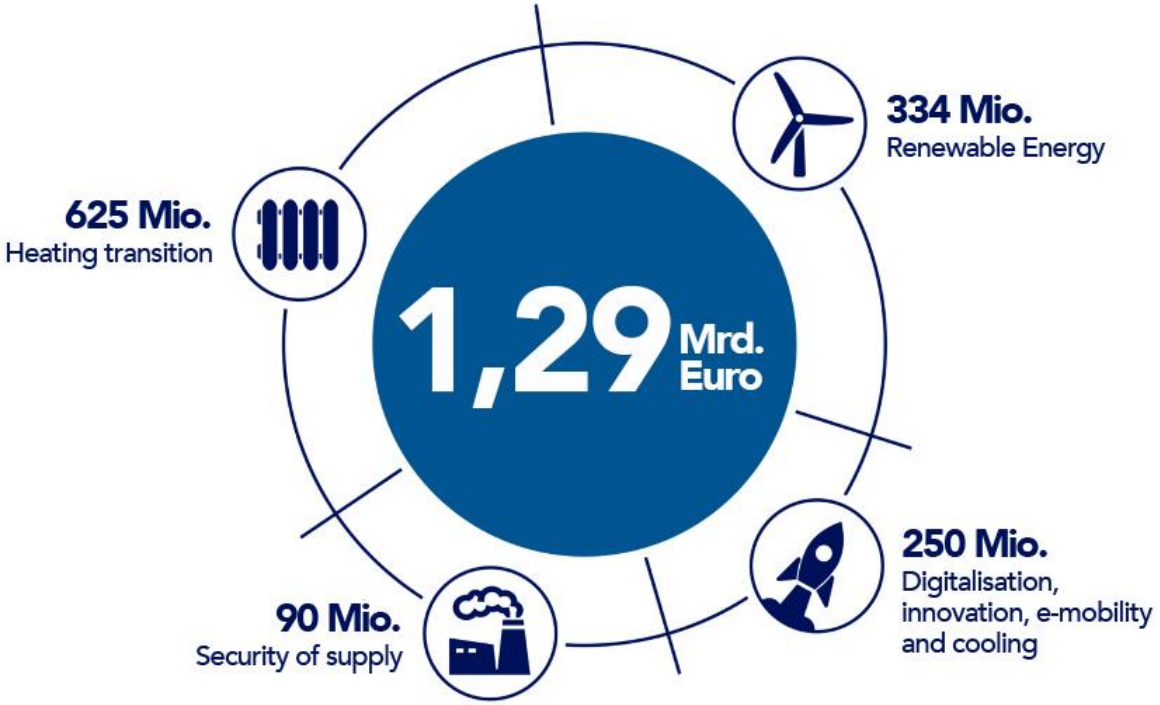
Wien Energie invests more than a billion Euros in CO_2 neutrality

Past income and investment 2017-2022 (Mio. Euros)



Future investment to 2027 (billion Euros)



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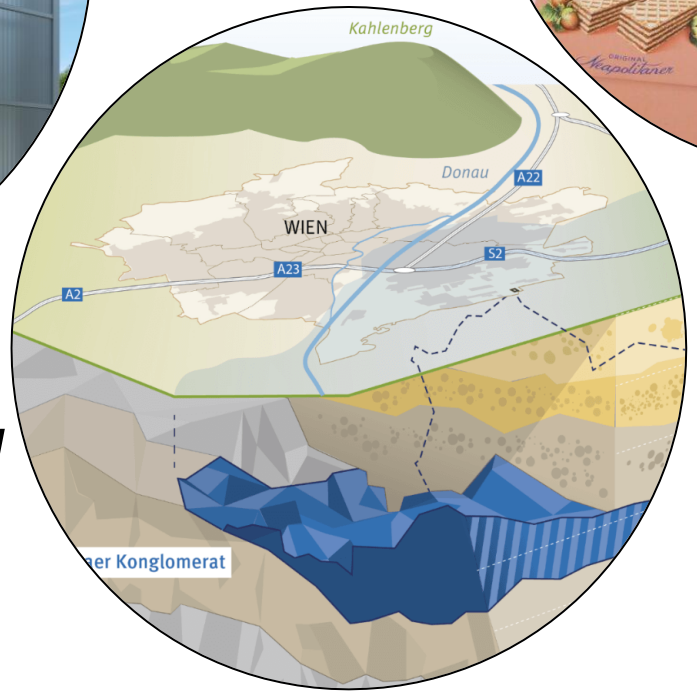
Wien Energie is taking action for achieving zero emissions by 2040

Large-scale heat pump waste water treatment plant Simmering

Industrial waste heat from Manner waffle production



Ground survey and test wells for deep geothermal energy

First hydrogen test in the operation of Donaustadt gas turbine

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Wien Energie is going to present a city benchmarking study

- Overview of the current state of play in terms of climate action
- Exchange of best practice example
- Foster collaboration among European cities

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