F4F

Flexumers4Future

COPENHAGEN, DENMARK

Emissions domains addressed by the Pilot Activity

- Consumption of non-electricity energy for thermal uses in buildings & facilities
- Consumption of electricity generated for buildings, facilities & infrastructure

Key Terms

Heat flexibility | District heating | Demand response | Cross-sector governance | Energy Leap Partnership | Building engagement | Sector coupling

Levers of Change

Data and Digitalisation | Democracy and participation | Financing and funding | Governance and policy | Learning and capabilities | Social innovation | Technology/infrastructure

Description of the Pilot Activity

Flexumers4Future (F4F) is piloting flexible district heating consumption. In the future, sustainable energy system production and consumption must be better integrated to maximize the utilization of renewable energy, reduce costs, and increase the security of supply. Demand side flexibility is crucial to enabling the planned electrification of the heat sector and adjusting to fluctuations in energy production based on wind and solar energy.

HOFOR is, together with the City of Copenhagen, testing a flexumer concept, where customers voluntarily contribute to system flexibility. Flexumers are defined as customers who actively contribute to a sustainable, secure, and affordable energy supply by offering thermal flexibility from their buildings to the district heating (DH) system. The project has proven quite successful, being able to activate up to around 10 MW of flexibility through voluntary agreements --- sufficient to deliver “proof-of-concept”.

Year One Highlights

Since April 2025, approximately 130 installations have been onboarded, representing 1 million m² across 22 large professional building owners --- demonstrating that heat flexibility can be recruited and managed at meaningful scale. A key insight was that different building segments require fundamentally different engagement approaches. Municipal buildings are directly accessible; professionally operated buildings were reached through the Energy Leap Partnership, a group of 49 building owners/administrators covering around 40% of Copenhagen's building stock; private owner-occupiers and rental housing require longer recruitment cycles, peer recommendations, and hands-on support. Tailoring engagement to each segment rather than applying a uniform approach proved essential to achieving uptake. A training module on preparing boiler rooms for heat flexibility was also developed. Institutionally, F4F has brought five city departments and the district heating company into consistent and structured collaboration, – a governance outcome the project treats as valuable in its own right, not just a project management arrangement. The pilot also generated direct follow-on investment: findings led to a new Interreg-funded project on heat flexibility in buildings with complex energy management systems, running from 2025 – 2028.

Innovation Highlights

One of the project's most transferable findings is that heat engineers --- not building owners --- are often the real decision-makers on technical upgrades in addition to day-to-day operation. Direct engagement through technical deep-dives proved more effective than sustainability messaging aimed at ownership level. F4F also developed a rigorous measurement methodology for heat flexibility at both system level (MW available, hours activated, MWh displaced) and building level (comfort maintained, disruption minimized), --- filling a gap in how flexibility is evaluated and compared across projects.

Twinning with Fuenlabrada (Spain)

Fuenlabarda visited Copenhagen in 2025 and 2026, and covered Copenhagen's Climate Strategy 2035, the Energy Leap Partnership model, district heating and cooling systems, and building flexibility implementation. Copenhagen´s visit to Fuenlabrada gave insights in city planning aspects in relation to city expansion in an increasingly arid climate.

Funded by the European Union