Andy Quezada

How to cool our cities?

Community Of Practice

ENERGYCITIES

Welcome !

1. Turn off your microphone, but feel free to ask for the floor at any time.
2. This is a Community of Practice, there is no wrong question
3. All presentation will be made available

On the Agenda today

1. How are cities responding to the challenge of fossil-free cooling and rising heat? **Nicolas Raimondi, Energy Cities**

2. How is Spain planning for cool cities? **Isabela Leon, Ecodes**

3. How can heat pumps deliver on sustainable cooling for cities? **Albert Blasco, Member of EHPA - Panasonic**

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How to cool our cities?

Back to memory lane

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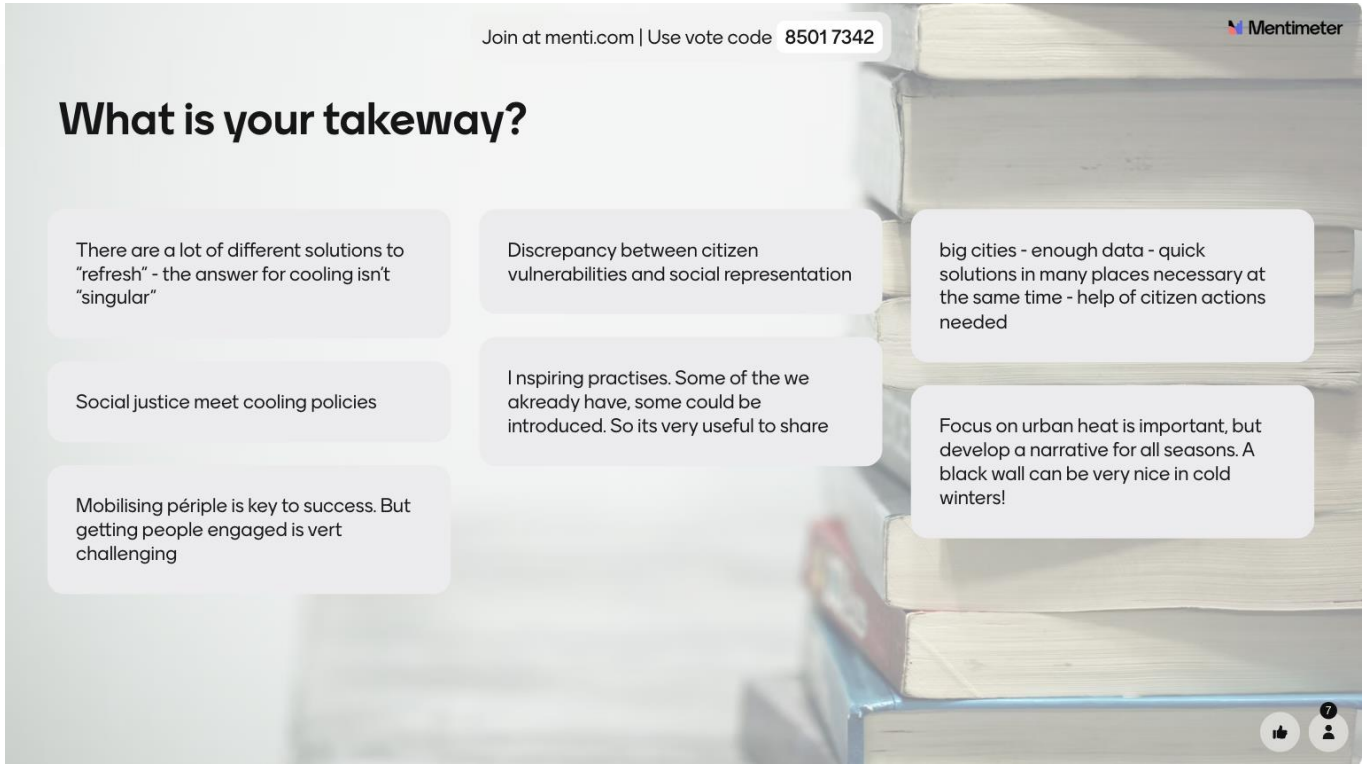
Energy Cities is taking it cool



- In 2025, Energy Cities launched the beginning of its Community of Practice on sustainable cooling
- Two sessions :
  - Testimony from Marseilles and Forest
  - Insights on district cooling
  - Covenant of Mayors

Yunus Tuğ

Policy Paper

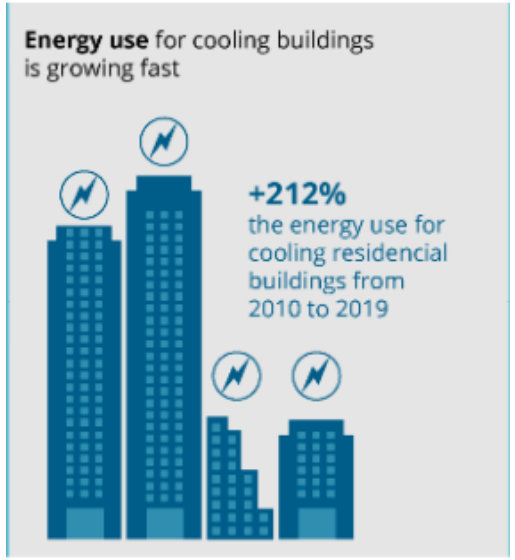
How are cities answering the call for fossil-free cooling?

Key Facts & Figures

- In 2025, together, heating and cooling account for half of the final energy consumption and nearly a quarter of CO_2 emissions. However, these figures mainly concern heat production. Cooling needs still represent less than 1% of the combined heating and cooling consumption of buildings.

- In the 19 euro-area countries, **the amount of final energy used for cooling in residential buildings tripled between 2010 and 2019**. During summer 2022, the need for cooling became a serious issue in Greece, Italy, Spain and other countries as a result of long-lasting and repeated heatwaves (Copernicus, 2022) combined with high energy prices and the war in Ukraine.

- The share of energy used for cooling, both in residential and non-residential buildings, could be **between 8% and 9% in 2050**, compared with only 2% in 2012.



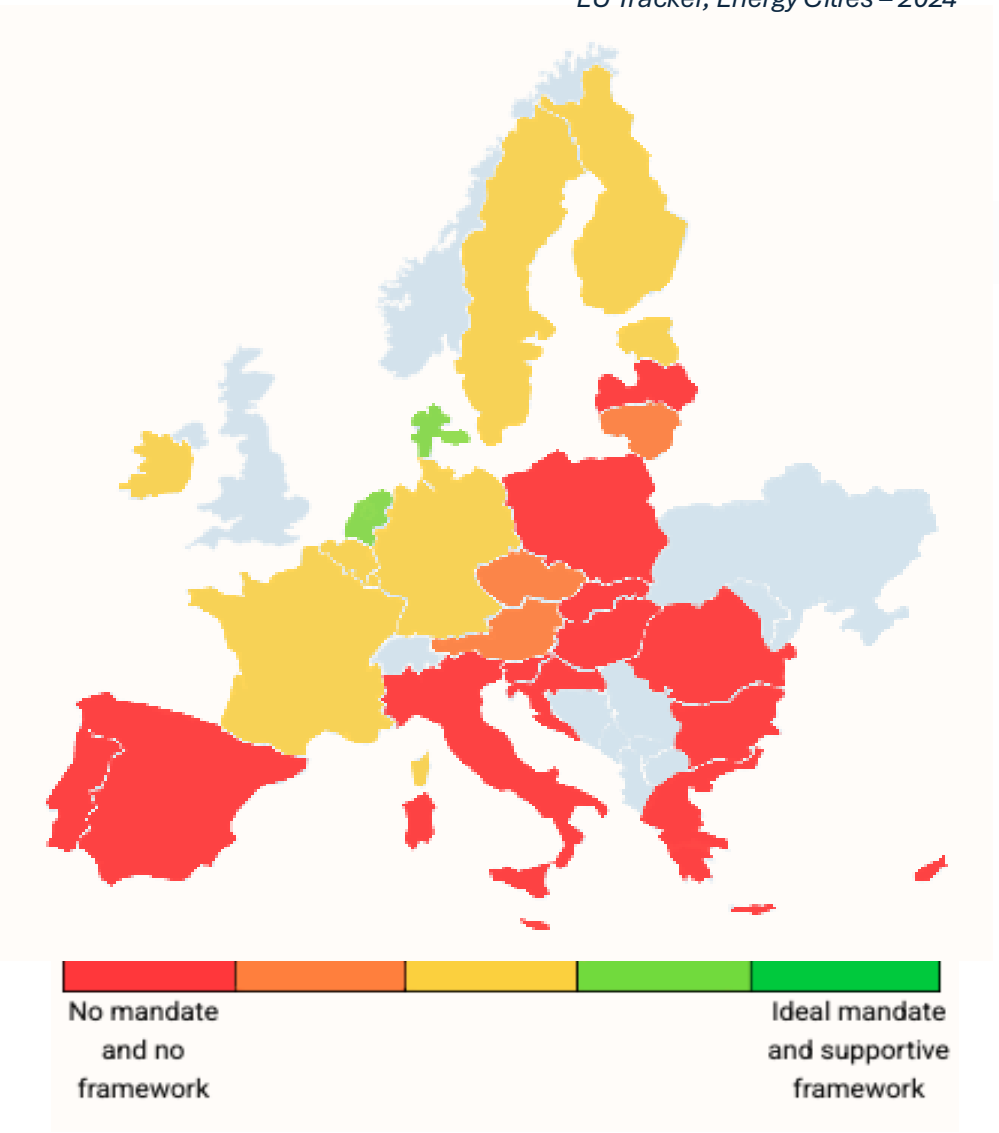
EU Context

- **Renewable Energy Directive**, introducing new targets for the heating and cooling sector (remember the Green Deal). The directive sets now a binding goal of a 1.1 percentage point increase per year in the share of renewables from 2026 to 2030.

- **Energy Efficiency Directive**, introducing further measures for the decarbonization and efficiency of the cooling sector, treating it on equal footing with heating. It also introduces a requirement for local authorities with more than 45,000 residents to implement heating and cooling plans (article 25.6)

- **HFCs regulations**, strengthens enforcement. Those requirements apply to the manufacturers, installers and to the end-life cycle.

EU Tracker, Energy Cities – 2024



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Cities on the move

BESANÇON (FRANCE) & POZNAŃ (POLAND)

In Besançon (France), the city centre was among the warmest place in the city. Place de la Révolution, framed by heritage buildings and archaeological history, was once entirely paved over. While visually striking, the square lacked shade or comfort. It was a space to pass through, not linger in. The city wanted to reclaim this space for both people and nature. Recently, the city began transforming the square: planting young trees, introducing wild grasses, placing benches, and using more permeable ground materials. The goal? To make the square a cool, welcoming place for socialising, relaxing, playing and meeting, while also buffering the city against heat and heavy rains. Though discrete for now, those young trees will one day form a dense, cooling canopy. This strategy was helped by the creation of a local heat map. This mapping exercise acted as a turning point in Besançon's adaptation planning, sounding the alarm on exactly how climate affects our built environment, and how our built environment intensifies climate events. The city adopted broader strategies that connected climate, water, and urban planning. For example, the Plan Ô combines water flow maps, drought plans, and infrastructure upgrades to prepare for the extremes to come[18].

In Poznań (Poland), the city has made it a priority to restore and develop one of its most important urban planning assets: the "green wedges and rings system" that cools the city. Nature-based solutions are being implemented to overcome the current fragmented distribution of green wedges and rings. Nature-based solutions in kindergarten and school gardens support ventilation and cooling in the city as well as contribute to climate change adaptation[19].

BESANÇON (FRANCE)

Source: Besançon's Heat Mapping, Energy Cities, 2025

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Cities on the move

VALENCIA (SPAIN) & PUGLIA REGION (ITALY)

In Valencia (Spain), the city is building a heat-resilient city through a network of climate shelters, low-tech cooling solutions, and community engagement—protecting vulnerable groups from rising temperatures with adaptive planning and coordinated local action. The Coolturate project (2023–2024), funded by the ***Energy Poverty Advisory Hub (EPAH)***, trained over 30 local agents on summer energy poverty and heat adaptation. The programme offered two tracks: one focused on household-level interventions (e.g., ventilation, shading, low-tech cooling), and another on community-scale strategies[21].

In the Puglia Region (Italy), authorities have enacted an ordinance to limit outdoor agricultural work during peak heat. Although the evaluation of its effects will take time, this measure is already raising awareness about heat related injuries in the workforce[22]. The WORKCLIMATE project is a two-year national initiative aimed to assess the impact of environmental thermal stress on workers' health and productivity and to identify interventions to reduce the risk. As part of the project, an integrated weather-climatic and epidemiological heat warning system has been developed to improve knowledge on the effect of thermal stress conditions on workers and to estimate the social costs of injuries at work.

Source: Example of Climate Shelter on the Climate Change Observatory. © Valencia Clima i Energia, 2025.

VALENCIA (SPAIN)

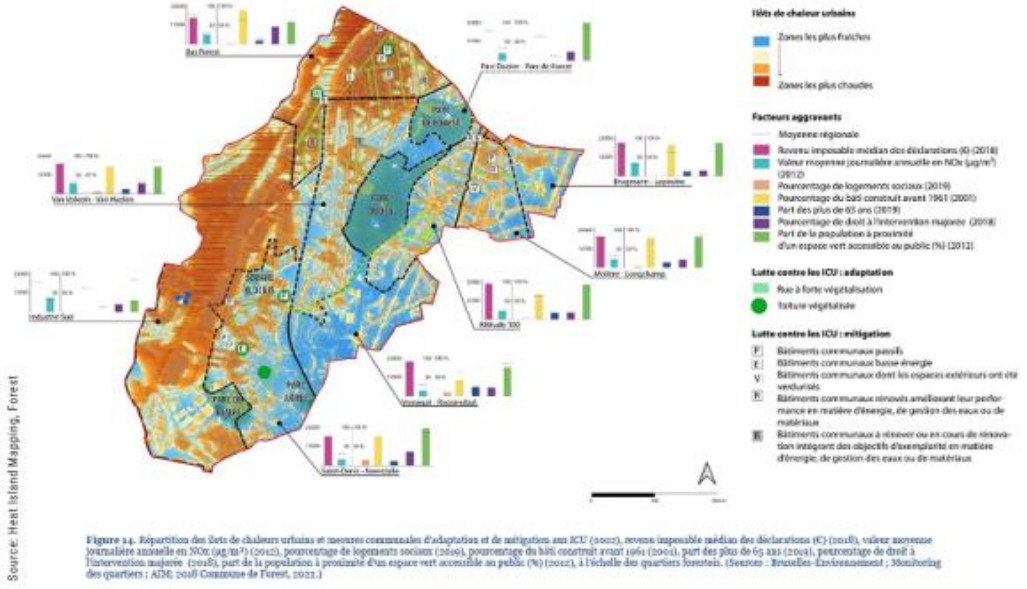
Beyond cool air

Protecting the most vulnerable.

Residents of less green neighborhoods and older housing are disproportionately affected by the "urban heat island" effect. These communities also tend to have lower-than-median taxable incomes.

Providing affordable energy for all

35 to 72 million people across the EU are facing energy poverty, with strong social implications Today. Renewable power is increasingly cost-competitive with fossil fuels – 81% of renewable capacity additions in 2023 produced cheaper electricity than fossil fuel alternatives – and the accelerated deployment of renewable power continues to trigger technology advancements in a virtuous cycle of production efficiency and cost reduction



Example of Forest (Belgium)

Policy recommandations

For Cities

- **Heating and cooling planning** provides an excellent opportunity to assess a city's cooling needs and potential. Residents of less green neighborhoods and older housing are disproportionately affected by the "urban heat island" effect. These communities also tend to have lower-than-median taxable incomes.
- Citizens should be at the core of any strategy. Cities are best positioned to involve citizens in cooling planning. **Participatory processes** and stakeholder engagement should not be overlooked
- **Fossil-free cooling solutions already exist** , but additional solutions may come from nature-based approaches or integrated urban planning.

For national and EU authorities

- National or/and regional authorities should develop **guidelines and provide support** for cities addressing their cooling needs.
- Monitoring and **gathering data** to map the heat island effect or the lack of cool areas should be at the centre of any cooling strategy. Therefore, cities should be given the proper technical and financial support to collect and access these data.
- The **EU Heating and Cooling Strategy** (first semester of 2026) should include guidance on cooling planning and cooling solutions.

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Thank you

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