

STARDUST enlightens Cluj-Napoca on its way to Climate Neutrality for 2030

Abstract

The vision of the follower city Cluj-Napoca is the outcome of aligning the objectives and predictions of the local strategic plans with state-of-the-art innovations of the STARDUST project. As a result, the link between Lighthouse Cities and Cluj-Napoca represents an important process of building knowledge, ensuring a clear and efficient road to achieving smart-city transformation. The project objectives and activities have been used as green vehicle to establishing a close partnership and to achieving climate neutrality in 2030.

Key points

Cluj-Napoca has been selected as one of the 100 EU Mission cities, and as such it is committed to accelerate efforts to achieve climate neutrality and serve as harbinger for other urban areas to follow.

Cluj-Napoca intends to reduce its GHG emissions by 80% for 2030.

Overview on key interventions and on the interrelated Replication Plan

Since 2011 the municipality of Cluj-Napoca has pursued seven key interventions:

1. integrated urban regeneration of apartment building blocks (home to 77% of Cluj-Napoca's residents);
2. Deep renovation of public and commercial buildings (responsible for half of GHG emissions of buildings) and brownfield redevelopments;
3. Improvement of public spaces to encourage people to spend more time outdoors and to limit urban heat islands;
4. Extension of the network of electric charging stations to benefit electric car users;
5. Extension of the Walkable City Program (established for a couple of years) and an update of the parking area policy;
6. Enhancement of the green transport infrastructure and reduction of congestion in the city
7. Continuous expansion of green areas (with emphasis on the metropolitan green belt with around 12,500 hectares of new forests).

Significant support for the mission's objectives comes from the lessons learned and experiences of the STARDUST Lighthouse Cities (LHC) summarised in a project Replication Plan for Cluj-Napoca. The plan has been tailored to the local context by taking into account the objectives of the 2030 Climate Neutrality Action Plan of Cluj-Napoca.

How is Cluj-Napoca paving its way to achieve climate neutrality in 2030?

Immediately after the European Green Deal had been drafted, Cluj-Napoca decided to adopt a more ambitious climate-neutrality strategy and set out investment programmes such as Green Cluj, Smart and Walkable City concepts, etc. Derived from the programmes and broken down into pilot projects, actions have been defined and tailored via smart participatory processes that involve citizens, academia, public and private companies, etc.

In order to achieve the 100 EU Mission objectives, Cluj-Napoca has developed the Draft 2030 Climate Neutrality Action Plan (NZC) together with local authorities, local businesses and other stakeholders.

A practical Replication Plan that is visionary and based on good practice

The innovative actions of STARDUST's Lighthouse Cities inspire Cluj-Napoca and Cluj Metropolitan Area in their efforts to become more energy-efficient, smart and carbon-neutral in 2030. Drawing on this knowledge and experience, Cluj-Napoca can implement its own measures and address the possible challenges and barriers upfront. It also allows the city to better track progress and set out contingency plans. City representatives work closely different stakeholders to roll out all the Smart/Scalable City measures, such as the energy efficiency measures, extension of district heating and the integration of renewables, and the e-mobility etc.

The following actions of the LHC are of particular interest to Cluj-Napoca:

A. Electric Smart Mobility of Tampere: The public transportation payment System and smart service packages.

Cluj-Napoca has implemented a well-developed programme for the acquisition and operation of e-buses in the past years. Although there are measures to encourage the use of public transport, such as the “Green Friday – free public transport,” additional incentives are needed. On request, civil servants and experts from Tampere have come to Cluj-Napoca and to the other follower cities to provide actionable insights that can be adapted to the local context.

B. Energy and Building Refurbishments in Pamplona: Renewable Energy Communities and Eco-buildings.

Cluj-Napoca has sought practical experiences of used models for local integration of RES, which can be explored in conjunction with previous incentives co-financed by the government. In this respect, LHC Pamplona has provided good practice examples by

replying to queries from the follower cities; it has described its own local incentives implemented and empirical analysis results, as undertaken within the STARDUST project.

Trento:

- Innovative plug-and-play systems for building retrofitting.
- Optimised building integrated photovoltaic systems.

Both measures are relevant as a replicable solution on a large scale for Cluj-Napoca’s public buildings and collective housing blocks. Low-temperature district heating with integrated ground source heat pumps represent de-carbonisation solutions for renovating the housing stocks – collective housing.

As a summary, most of the energy-efficiency solutions tested and validated in the project for are adaptable for Cluj-Napoca.

References

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