

## PATHWAY TO BUILDINGS' DECARBONISATION: THE KEY ROLE OF DISTRICT HEATING & COOLING SYSTEMS

While the European Union is facing an unprecedented energy crisis, district heating and cooling (DHC) solutions keep 60 millions of European citizens warm and the technology is present in cities where it could potentially provide sustainable, affordable and reliable heat to at least 140 million people. As DHC already greatly contribute to the decarbonisation of the heating sector, by **harnessing both local renewable heat and sustainable excess heat in their current energy mix**, the revision of the Energy Performance of Buildings Directive (EPBD) must ensure that **zero emission buildings (ZEB)** can be supplied with energy from efficient district heating and cooling (EDHC) systems.

Besides, the definition of EDHC systems within the proposal of Energy Efficiency Directive (EED) - currently being discussed in the trilogue negotiations - foresees a gradual decarbonisation path, with the use of at least 50% renewable energy and waste heat by 2035, at least 75% by 2045 and only renewable and waste heat by 2050. **This gradual approach will result in the full modernisation and decarbonisation of the sector by 2050**. Moreover, the article 24 of the currently revised Renewable Energy Directive (RED III) says that district heating operators have to **increase the renewable and waste heat share in their systems**, which is in line with the EU's climate neutrality plan. Furthermore, in the proposed Industrial Emissions Directive (IED) **operators will be required to produce transformation plans** by 30 June 2030 as part of their environmental management systems. This will also further ensure the **decarbonisation of the sector in the medium to long-term**.

According to the Commission's proposal on EPBD, after 2030, new and renovated buildings will have to comply with **ZEB requirements**. The current definition will not allow ZEB to be connected to district heating and cooling systems unless they exclusively use renewable energy and waste heat sources. **This would result in encouraging the heat customers to disconnect from already existing and operating district heating systems, while viable (technically or economically) alternative efficient heating solutions will not necessarily be available**.

Moreover, **the investments made to connect buildings and other heat consumers to a district heating and cooling infrastructure are significant**. With regards to limited financial resources – and more generally in times of materials' scarcity - **stranded assets must be avoided where existing DHC systems can progressively be made carbon neutral**.

Thus, **the adoption of the ZEB criteria**, as proposed by the Commission in the revision of the EPBD, **would place DHC in a disadvantage compared to individual solutions**, which do not necessarily have the same efficiency and decarbonisation potential.

**The adequate heat policy can give economic and social stability to Europe**. To scale up the decarbonisation of all heating solutions, and optimise the investments needed in the context of the Renovation wave **we suggest that:**

- a building supplied by an efficient district heating and cooling system fulfilling the definition laid out in article 24 of the Energy efficiency Directive should be considered as meeting the “zero-emission buildings” requirements;
- and the related Annex III should also be **designed in a way which ensures that efficient district heating and cooling systems are integral to ZEB**.