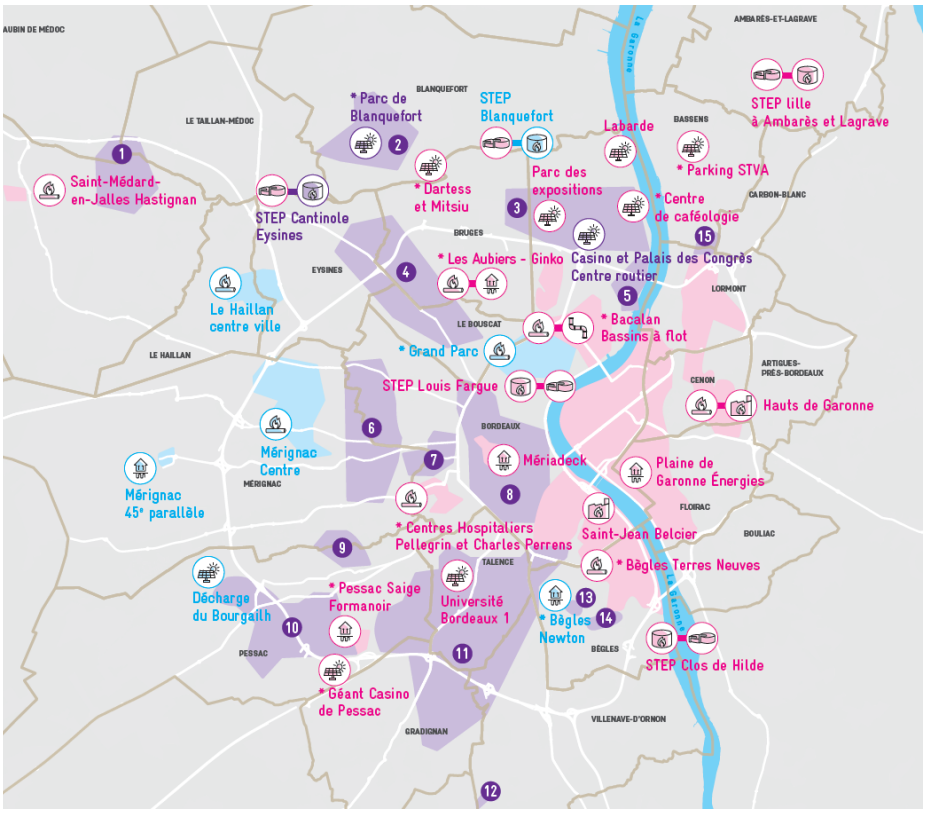
BORDEAUX AND DISTRICT HEATING NETWORKS: HOW IT STARTED...

Targets

Bordeaux Metropole has an ambitious climate policy and is one of the 112 Mission Cities selected by the European Commission to reach climate neutrality by 2030. By 2050, the consumed energy will be 100% renewable. To reach its objectives, the urban area will have to decrease by 50% its energy consumption (from 16,400GWh in 2010 to 8,200GWh in 2050). Between 2020 and 2050, five different municipal mandates will take place . Hence the will from Bordeaux to start with the reduction of 1/5 of the consumption (1,500GWh) and increase by 1,500GWh the renewable production by 2026. District heating networks will play a key role in this task.

Existing networks

In the urban area of Bordeaux, there are 9 major district heating networks which are already operating, with a variety of energy supply (at least 80% of renewable per network): geothermal energy, waste incineration, biomass, wastewater treatment, cogeneration (gas and biomass). 4 of those networks are privately operated. In 2019, the networks produced 200GWh/ year, representing 8% of the local renewable production and supplying around 14% of the households.



Wastewater treatment

Waste incineration

Geothermal

Biomass

Figure 1: The district heating networks in the centre of Bordeaux Métropole (Source: Bordeaux Métropole)

... HOW IT IS GOING

Deciding to extend the network

Seeing the first benefits of the existing networks, the metropolitan area of Bordeaux supported the idea of extending the district heating networks coverage.
In times of rising energy prices, Bordeaux saw district heating as a solid argument for households willing to have a stable energy bill. This is especially true when comparing with the energy prices of fossil fuels.

There are already 5 projects which should be implemented, provided that concessions to build and operate the networks are agreed upon. In addition, feasibility studies were carried out by the metropolitan area to determine the potential development of new district heating networks. Those studies considered heat demand density as a main factor for development. In total, they resulted into 16 potential new zones of development, including stakeholders such as hospitals, schools, social housing, and companies.

By 2026, this should triple the existing capacity for district heating, adding 450GWh to the existing 200GWh, covering the needs of more than 45,000 households. Geothermal energy and biomass will be the main fuels, also participating in the increase of renewable production on the territory.

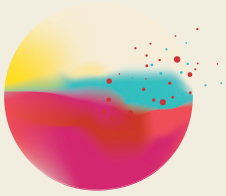
Impact on the territory

Beyond the expected decrease of greenhouse gas emissions in the area and the increase of local renewable production, the socio-economic impact of such an ambition is important. It is translated into job creation. Every contract to create or operate public district heating networks have a specific clause to support the insertion of jobless people, supporting local employment. In addition, thanks to the feasibility studies and the proved potential of extension for the network, 6 additional job positions were created in the municipality, with the support of the ELENA fund by the EIB, dedicated to the question of district heating in the urban area.

Extending district heating networks: why does it matter?

With the upcoming revision of the Energy Efficiency Directive, the European Union has the goal to reach a yearly increase of the share of renewables in heating and cooling by 2.3% percentage points, as well as in district heating networks.
In addition, extending district heating networks has multiple benefits: decreasing the use of fossil fuels and thus diminishing the reliance on external factors in terms of prices but also delivery, protecting citizens, increasing energy security through the use of local resources, creating and relocalising sustainable jobs in your city.

So, embrace the example of Bordeaux and foster heating decarbonisation!



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