

GINKO eco-district BORDEAUX - FRANCE



The 100% renewable energy eco-district



GINKO : A New Neighborhood in Bordeaux

- **Residential : 2,200 apartments**
 - 90% Low-Consumption Buildings
- **Other use**
 - Offices
 - Shops
 - 2 schools
 - A gymnasium
 - Art dedicated Buildings (Dance ...)
- **Green transportations**
 - Tram's stops within 300 meters of each buildings
 - Footpaths, Walking School Bus & Bike rental facility
- **Energy Efficiency and Renewable Energy Prize**
 - Awarded by French Environment Ministry



GINKO : The energetic needs

Input Data

Type of construction	Surface to be heated (m2)
Housing	170,000
Small Businesses	2,000
Malls	22,000
Offices	25,000
Public buildings (schools...)	19,000

Estimated annual energy needs (COFELY)

- Heating : 20,000 MWh / year
- Cooling : 4,000 MWh / year



- **A district heating system**

- 40 sub-stations

- **A district energy sharing system on the commercial buildings**

- Exchange and energy recovery on a low temperature district system

- **A 100% renewable energy Heating & Cooling Plant**

- 100% Biomass (Solid and Liquid)

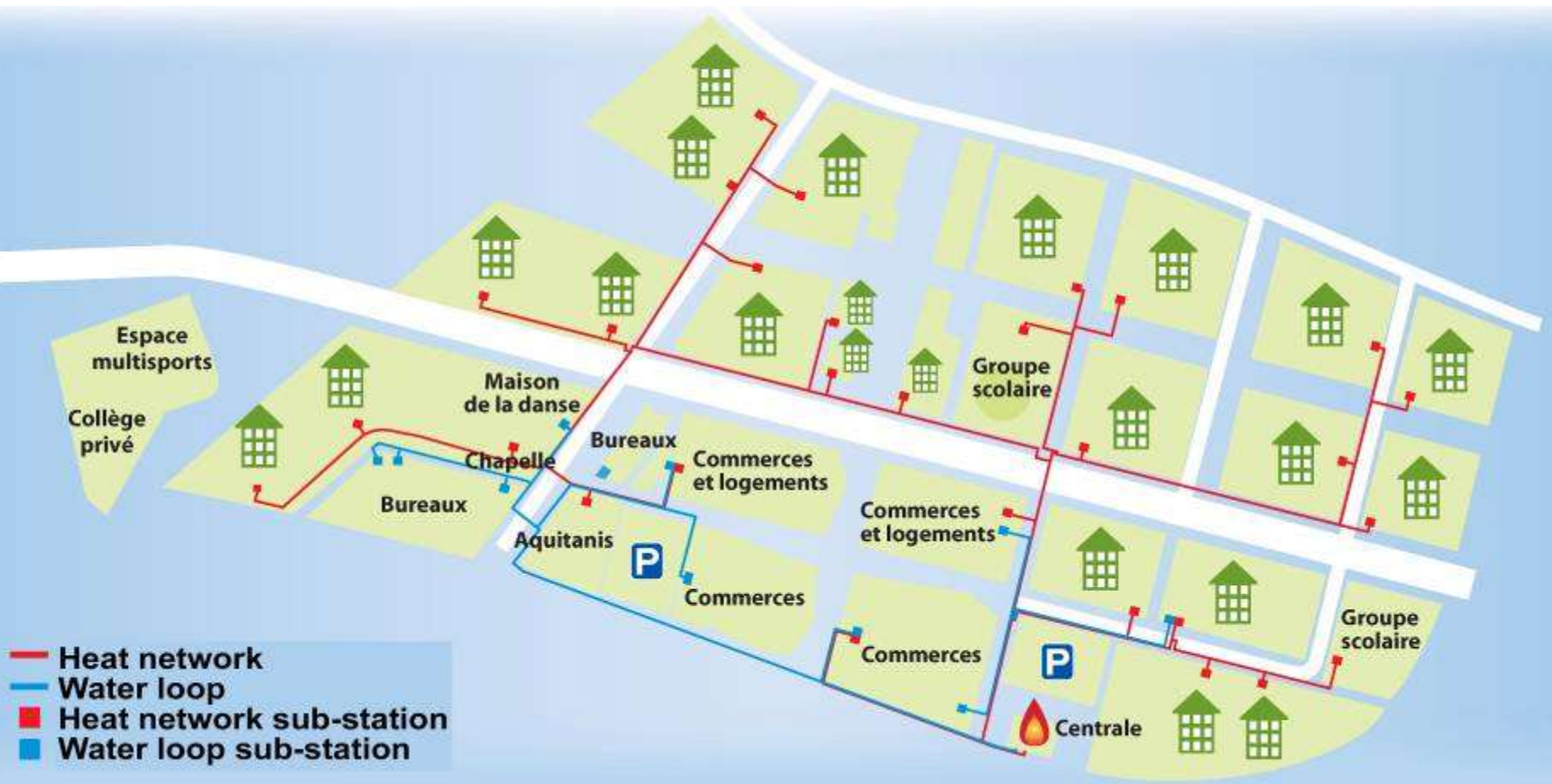
- **An smart monitoring to optimize energy production**

- Cofelyvision



GINKO : The district system

- District Heating System : 5,2 km
- District Low Temperature System : 2,3 km



GINKO : The low temperature district system

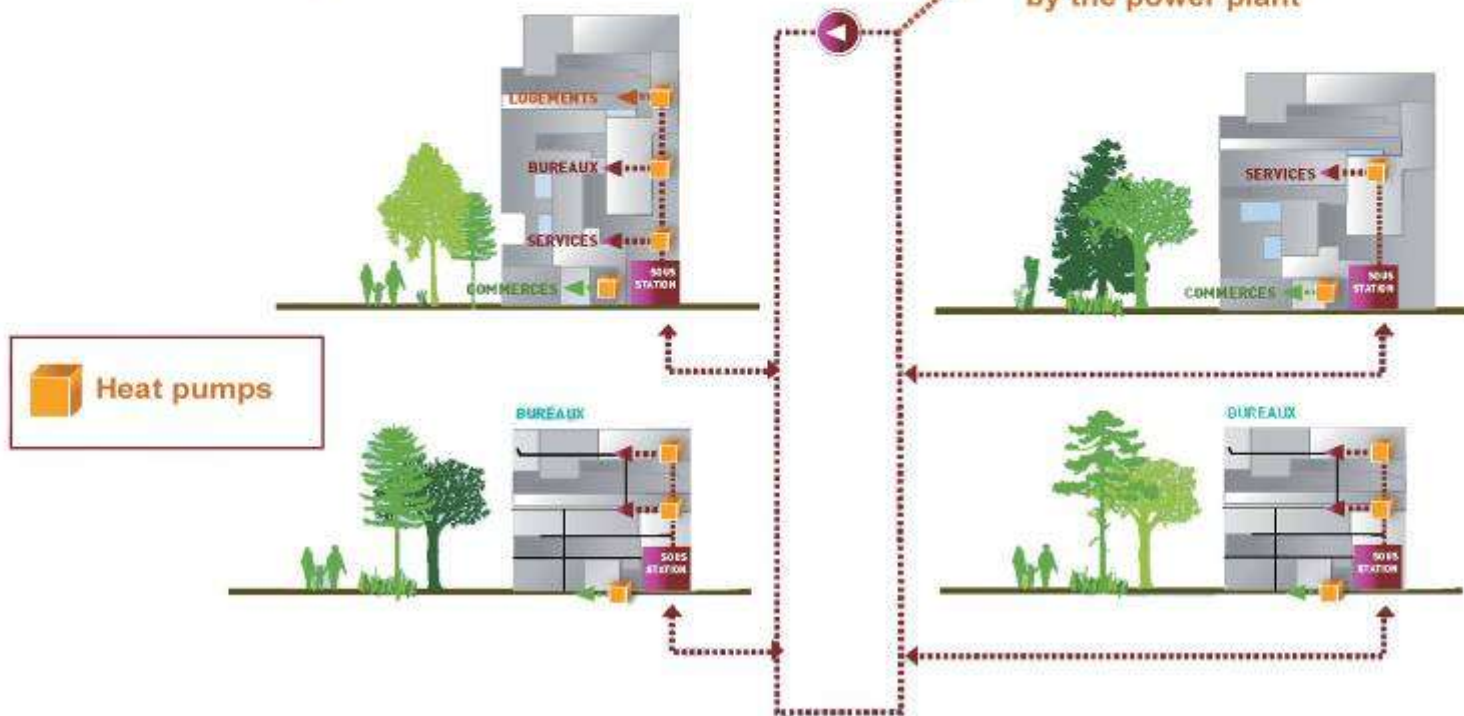
Cofely provides to shops and offices a water loop (between 20 and 35 ° C) for their refresh.

This process relies on the exchange and retrieval of energy from heat pumps.

This technique will increase the economic and environmental performance of GINKO



Temperature control by the power plant



Ginko : 100% renewable energy H&C Plant

● **Solid Biomass : 3 MW**

- Condensing Wood Boiler equipped with a economizer to increase energy efficiency
- Expected Production of 16,500 MWh

● **Oil & Gas boilers : 12 MW**

- Consumption of food oil 300 m³ / year
- Expected Production of 3,500 MWh
- Gas for spare use only

● **Adiabatic Coolers : 4,5MW**

● **3,500 tons of CO₂ per year avoided**

- Eq. 2,300 vehicles per year

● **Commissioning during summer 2012**



Ginko : Liquid Biomass

Stable and constant quality of the oil

- A treatment always needed
- Hard to find locally

Exploring 2 leads

- Oil from the Pine Industry (paper industry for example)
- Food oil

Creating a chain supply from the source to the boiler : Yellowbio



Solution provided by Yellowbio

Ginko : Smart monitoring

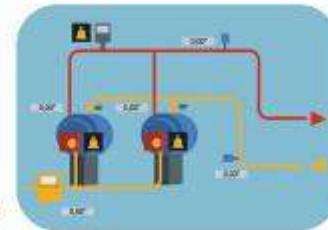
COFELYdirect



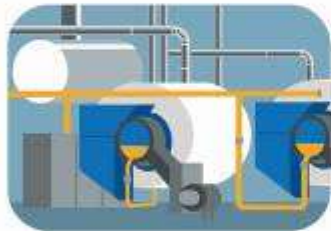
Performance monitoring facilities



Real time alarms



Visualization of synoptic facilities



Remote interaction with facilities



Ongoing support Centers of expertise



Technician with a mobile device



Easier customer relations

Thank you

