

## SYNOPSIS

In La Viscose area in Echirolles, unaffordable electric heating is replaced by biomass district heating. A similar switch to renewable energy sources is developed in other social housing areas.



## BACKGROUND

La Viscose is a rundown area with many workers on minimum wage and unemployment summing up to almost 13%. There are in total 362 dwellings, all of them social housing and garden plots that may be rented by residents. The flats were heated individually and damp, the peeling paint was evidence of unaffordable heating, poor insulation and inadequate ventilation. The local authority and the social housing company took over the area in 1982 when a comprehensive refurbishment programme began and was completed at the end of the 1990s.

## OBJECTIVES

Reduce carbon emissions across La Viscose area by using biomass for the district heating system (older buildings) and solar heating (newer buildings).

## PROJECT DESCRIPTION

The number of dwellings was reduced to increase their size and install a bathroom in every flat. The roofs were refurbished and double glazing and new doors were installed. The insulation comprises an external 10 cm layer of glass wool or polystyrene, which was installed on all but two of the old buildings.

As part of CONCERTO SESAC programme, French consultants visited the City of Växjö in Sweden to get inspired by their district heating system. Three different options were then explored for La Viscose. A solution was adopted, using prefabricated substations in each building, bringing improvements to the traditional French model and saving time and money.

## RESULTS

- Energy saved: 5,000 KWh/year.
- CO<sub>2</sub> emissions avoided: 264 t/year.
- Ecological benefits: cost reduction of energy production, conversion to biomass energy, reduction of CO<sub>2</sub> emissions.

## RECOMMENDATIONS

EU projects like CONCERTO SESAC enable pan-European collaboration, in this case to implement a Swedish model of district heating in France.



## FURTHER INFORMATION

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