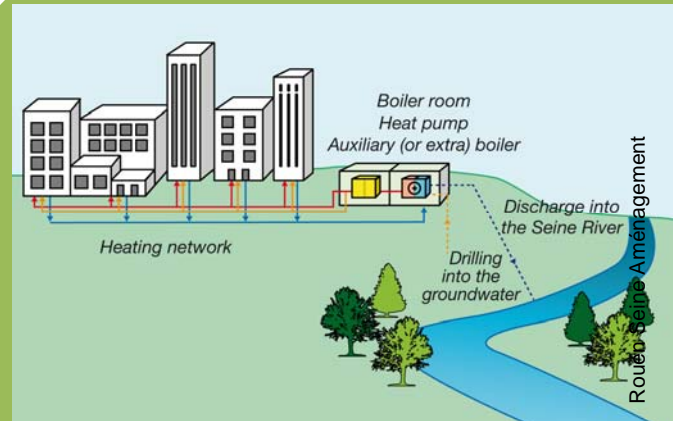


## Renewable energy at “Luciline”

Status	Implementation (2012-2013)
Location	France, Seine-Maritime, Haute-Normandie, City of Rouen, Luciline's district
Spatial info	Urban quarter or street; Business/industrial park, Residential area
Measure type(s)	Urban water spaces – flowing; Renewable energy; Urban setting
Contact	contact@rouen-seine.fr



### Description and Aim

A heating network using geothermal energy is implemented in the restructured district of Luciline in the city of Rouen in order to cover the needs in heating and hot water. Steps:

- A historic and documentary survey
- Drilling campaign (summer/ winter) at 20 to 70m depth below surface level to test the heat potential of the water
- Simulation of the future needs in heating and hot water
- Economic analysis
- To launch competition between different firms
- To assign the delegate of the public service
- Implementation

Pre-condition are residential and office buildings with low energy consumption. Connection is compulsory for property owners/inhabitants. The water used as geothermal source is discharged in the blue-green public water surface network.

### Adaptation to climate change

The overall aim is to limit the impact of urban areas regarding the changing climate and so protect the future population and in the same time to offer less expensive energy over the time. Low energy consumption buildings (with excellent insulation) are at the same time more resilient against hot and cold weather conditions.

#### Problems addressed:

Heat wave, extreme cold, other: mitigation of greenhouse gas emissions.

#### Receptor(s):

Population, infrastructure, built environment, economy, natural resources

### Experiences

#### Functionality and further synergies/benefits:

The measure is part of a combined approach to develop a residential and business quarter, which is sustainable in all aspects of transport, water, green and energy.

Besides lowering CO<sub>2</sub>-emissions the development of the geothermal heating network contributes to an attractive urban living environment through energy reduced cost and through circulation of surface water.

At this site other renewable energy sources revealed disadvantages: Biomass proved to involve too many implementation constraints and the site was less favourable for using wind power. The solar potential was estimated to supply half of the energy needed.

#### Costs:

The implementation of renewable energies requires financial support of public institutions. The benefits are expected in a longer time.

#### Funding:

INTERREG IV B-programme, National environment agency (ADEME), City of Rouen

#### Stakeholder involvement:

Rouen Seine Aménagement, municipality of Rouen for the research and the legal editing and administrative for the management of the resource, future promoters who will construct on the area and the operating firms implementing the heat network.

#### Acceptance:

To raise acceptance: communication activities to building developers; Information campaigns to public; regular working groups with local administrators, technical department and politicians

#### Obstacles/restrictions:

The shallow ground water geothermal energy is a new technology which involves experimentation cost.