

## Best-Practise-projects for bioenergy utilisation in urban environments



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Project name : Brignais  
Location : Rhône-Alpes  
Bioenergy technology concerned : wood energy

### Executive summary :

L'OPAC du Rhône, in order to maintain, renovate its public building complex and reduce expenses intended to optimize the heating system operation and turned to energy wood in 2003.

### Case description

#### Background :

L'OPAC du Rhône manages on the Brignais district a 366 social housing complex dated from 1971 spread over 18 buildings and connected at first to a coal heating system and then from 1997 which has been operating only on back-up fuel oil. This social housing complex is situated in urban area with potential unrest.

#### Description :

The residence « les Pérouses » in Brignais was first renovated in 1992, outside millwork were replaced and facades were renovated with insulation from outside. A wood boiler was installed in 2003 to reduce rental expenses in the framework of a social housing renovation plan for 366 dwellings equivalent to a total habitable surface of 25.041 m<sup>2</sup>. This wood boiler replaces the previous fuel oil one.

#### Technical data (capacity, output, etc.):

The wood boiler has a capacity of 1200 kW and operates on pallets waste. The back-up energy comes from 2 natural gas boilers, with a capacity of 1540 kW for the first one and of 1740 kW for the standby one.

The silo has a capacity of 200 m<sup>3</sup>. It is filled up on a regular basis by 2.5 trailer trucks of 90 m<sup>3</sup> per week in the core of the heating period.

#### Financial data (investment, subsidies, etc.) :

The global investment cost is 1.906.880 € tax included, the project was greatly supported/subsidized by the French State, l'ADEME and la Région Rhône-Alpes.

### Which main problems had to be overcome?

Legal factors : The mounting of the project required to draw every attention to supplying contracts between the energy supplier and the maintenance company, which allowed the choice of supplier contract according to the capacity in MWh at the boiler output and not according to the tonnes of delivered fuel.

Socio-economic factors :

Economic: This investment was clearly higher than the gas boiler one. It implied greater capital allowances and loans. This overcost in term of investment compared to gas reached 30%.

Others:

**Information flow** (which information needed, sources, difficulties, etc.)

The residents' approval required to organize several meetings with all the project players.

**Lessons learned :**

The project was outstanding economically. The analysis of rental expenses from 2002 to 2004 showed a reduction of 42%. This reduction has a direct consequence for the tenants who have seen the average cost of their home decrease from 437 € tax included in 2002/2003 to 265 € tax included in 2004/2005.

Contracting authority:

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Pictures:

