

# Best practices report OPAC 38

Country : FRANCE



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# **Best practices study of energy service implementation**

**Country: France**

**Project: Operating and maintenance contract for collective central heating**

**Customer: OPAC 38**

**Energy Service Provider: Dalkia, Elyo and Compagnie de Chauffage**

**Financial provider (if other):**

## **1 Executive summary**

For several years, OPAC 38, who manages nearly 22 000 dwellings in the county of Isère, is willing to implement modern actions both on the social side (core of its mission as social housing company) and on the environmental aspect (energy expenses management, development of renewable energy sources).

The general idea of the energy policy of OPAC 38 is to improve the quality of service for the customers (the renters), without increasing the costs (that is the sum of the rent and of the service and maintenance charges).

There is a specific department within OPAC 38 for energy, with two engineers. The existence of this department is consistent with the political will to implement a sustainable development policy, which started with the energy policy (at the beginning, with one engineer).

These operating and maintenance contracts are implemented for all the collective central heating systems. If sanitary hot water is heated with the collective boiler, it is also included in the contract. They include :

- Energy procurement
- Operating and maintenance
- Bigger maintenance and renewing : it is an annually fixed amount that allow to replace heating systems parts when they are out of order, and works as an insurance (the ESCO must implement all the necessary repairs).

Instalments occur in March, May, July, September, November for 15 % of the total amount, and the final invoice includes the results of operating and review of prices. If the annual (based on civil year) consumption, after climatic correction is over the target, OPAC 38 pays only 1/3 of the over cost. If it is under the target, OPAC 38 gets 2/3 of the difference.

The contract is 10 years long, subdivided in lots, corresponding to geographical areas.

For year 2004, considering the climatic conditions, the target value was an energy consumption of 101,8 GWh for 8905 dwellings. The actual value has been 97,8 GWh. This represents 3,77 M€ for energy procurement, and 0,56 M€ for operating and maintenance. The financial savings have reached an amount of 58 k€.

## **2 Background**

For several years, OPAC 38, who manages nearly 22 000 dwellings in the county of Isère, is willing to implement modern actions both on the social side (core of its mission as social housing company) and on the environmental aspect (energy expenses management, development of renewable energy sources).

A specific service dedicated to environment and energy has been implemented several years ago.

This led to first implement solar heating for sanitary hot water, or wood boilers, then to the construction of 10 bio-climatic dwellings (Saint-Hilaire du Touvet) and 40 dwellings at Bourgoin-Jallieu built according to the principles of "High Environmental Quality".

Other policies tend to replace direct electric heating with collective central heating, and to implement modern heating systems in dwellings with no heating system.

OPAC 38 started a Local Agenda 21 in order to get a common culture (the company and the renters) and to formalise the existing actions. A "Sustainable Development Plan", including 95 actions, is to be published in spring 2005 and will start immediately.

Considering the varieties of heating systems, OPAC 38 decided a long time ago (more than 25 years) to subcontract the operating and maintenance for the collective central heating that represents 9 000 dwellings.

Specific reflection has been conducted in order to determine if third financing could be used in order to finance the implementation of investments for the transformation of direct electric heating systems to collective central heating systems using wood energy. The results were not interesting for OPAC 38. Its specific financial situation, that is good due to a very small vacancy rate, combined with the specific subsidies and rates of interest, leads it to prefer direct investment.

## **3 Aims and ambitions with the energy service project**

The general idea of the energy policy of OPAC 38 is to improve the quality of service for the customers (the renters), without increasing the costs (that is the sum of the rent and of the service and maintenance charges).

The specific targets for improvement are the individual heating systems, the direct electric heating and the apartments without heating systems. The main actions include the implementation of collective heating systems and the use of renewable energy sources

Operating and maintenance contracts are implemented for a long time for collective central heating. It has been decided in 1990 to implement a contract linked to results in order to improve the results (and at least to avoid cost increases). The idea is now an externalisation of the management of these heating systems.

The contract leaves 2/3 of the responsibility of over consumption to the energy service provider. This leaves a small responsibility to OPAC 38 in case the over consumption would be due to renters comportment.

On the other side, the energy service provider gets only 1/3 of the results, in order to avoid problems such as too low internal temperature that would lead to difficulties for OPAC 38 with its renters.

## **4 The customer's internal preparation in prior of the project**

There is a specific department within OPAC 38 for energy, with two engineers. The existence of this department is consistent with the political will to implement a sustainable development policy, which started with the energy policy (at the beginning, with one engineer).

Lots of work has been done during several years in order to collect all the data about energy for each buildings. This work is now done each year, that helps to get data for each boiler system, such as :

- energy consumption, including climatic correction
- energy costs, including operating and maintenance
- ratios, allowing comparisons between the different heating systems

A very complete synthesis is done each year.

The determination of the target consumption values is anyway difficult, and is based on the previous values.

## **5 The purchasing and contractual process**

There is a public tender for the contract (every 10 years). The contract is subdivided in lots, corresponding to geographical areas (the county of Isère is 120 km long from north to south) plus a specific lot for buildings heated with district heating in the agglomeration of Grenoble.

This procedure leaves no room for negotiation.

Lots are attributed separately, and the results for the 2 000 – 2 010 contracts are :

- 1 lot for Compagnie de Chauffage de Grenoble, a semi-public company that runs the district heating of the agglomeration of Grenoble
- 1 lot for Elyo, member of the Suez group
- 2 lots for Dalkia, member of the Veolia group

The consumption target for each boiler is indicated in the tender, according to previous results. If there is either a new boiler or an important refurbishment for a building, an additional clause is added to the contract according to the results of the first year of operating (this needs an important survey of the operating during this first year to avoid over consumption).

There is also a renegotiation clause in case of the real consumption is too low compared to the target value.

## 6 The content of the contract

This contract (divided in lots as explained in chapter 5) is implemented for all the collective central heating systems. If sanitary hot water is heated with the collective boiler, it is also included in the contract. The contract includes :

- Energy procurement (called P1) : for natural gas and district heating, it is a delegation of payment. For oil and LPG, there is a review of prices that is limited in order to involve the ESCO.
- Operating and maintenance (called P2) : on a fixed basis, it includes the current maintenance actions without replacement of bigger parts (such as a furnace).
- Bigger maintenance and renewing (called P3) : it is a annually fixed amount that allow to replace heating systems parts when they are out of order, and works as an insurance (the ESCO must implement all the necessary repairs). The actual annual expenses can be under or over the fixed amount, and a specific account is dedicated to determine the available amount. At the end of the contract, if the ESCO expenses have been over the fixed amount, it gets only 1/3 of this amount, and keeps 1/3 of the amount if the expenses have been lower.

Instalments occur in March, May, July, September, November for 15 % of the total amount, and the final invoice includes the results of operating and review of prices. If the annual (based on civil year) consumption, after climatic correction is over the target, OPAC 38 pays only 1/3 of the over cost. If it is under the target, OPAC 38 gets 2/3 of the difference.

The contract is 10 years long.

## 7 Results

For year 2004, considering the climatic conditions, the target value was an energy consumption of 101,8 GWh for 8905 dwellings. The actual value has been 97,8 GWh, that led to a payment of 100,4 GWh to the ESCOs. This represents 3,77 M€ for energy procurement, and 0,56 M€ for operating and maintenance.

The financial savings have reached an amount of 58 k€.

The target values are established with the obligation for the ESCO to maintain a internal temperature of 20°C. There are some few problems with the renters (in this case they are registered), especially with balancing of heating circuits, but they are quite rare.

## 8 Gained experiences and lessons learned

The contract helps to maintain the maintenance costs to a stable value, but its real impact on energy savings is still to be determined precisely, the main difficulty being the determination of target values (that are based on previous values).

This kind of contract does not really help to determine the actions that could be implemented to improve energy efficiency.

## 9 What problems and applied solutions could be used at the EU-level

This project helps to get very precise data for the energy consumption and expenses of each group of buildings, that is very useful to measure the results of the energy policy. For the implementation of the directive on energy performance of buildings, it will be a little useful by getting technical data on the heating systems.

## 10 Contact information

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