

**Public Buildings ENergy Efficiency Services
PU-BENEFS
Regional Market preparation**

**Operation and maintenance
contracts with energy saving
incentives in social housing**

European Seminar Brussels, 20th June 2007

**Overview of practiced energy efficiency
services in France**

- Energy performance contracts
- Third party financing
- Operation and maintenance with incentives
- Dedicated leasing offers
- Public Private Partnership contracts

French market structure for boiler operation

- Big sized public bodies (mainly):
 - Operation by internal technical services
 - Maintenance can be outsourced
- Small and medium sized public bodies (mainly):
 - Externalisation of maintenance (and operation) to companies (eg Dalkia/Véolia or Elyo/Suez etc. can be compared to ESCO)

Cost structure for operation and maintenance in France for heating and DHW

- P1: energy/fuel purchase
- P2: operation and maintenance
- P3: important repairs and replacements
- P4: investment (new or refurbishment)
- Operation and maintenance contracts cover:
 - Minimum P1 and P2
 - Maximum P1, P2, P3

Contract types for operation and maintenance

Defined by public regulation

- PF: only maintenance (P2)
- MF: fixed price service (not depending on real consumption, P1 incl.)
- MT: service price with climatic correction (P1+P2)
- MC: service price based on heat supplied (P1+P2)
- CP: service price according fuel supplied (P1+P2)

Details of performance guarantees

Utilised for heat + DHW supply

- Maintenance: definition of specific objectives
- Total guarantee:
 - at contract end same state of production equipment as at the beginning (includes P3)
 - Can be linked to performance guarantee
- Energy consumption guarantee:
 - function of degree days and minimum indoor temperature
 - If below target : e.g. 1/3 of savings for service provider
 - If above target: e.g. 2/3 of over consumption paid by service provider
- Fuel prices, wages etc. are in general indexed

Example of social housing company OPAC 38 (Isère province)

- 30 million dwellings in France
- 4 million social dwellings
- OPAC 38
 - 25 000 dwellings
 - 200 dwellings build/year
 - 300 dwellings refurbished/year
 - Headquarter: Grenoble
 - 7 branches for decentralised management
 - www.opac38.fr



Connection between social housing and sustainable development

The three basics are:

- Societal
 - Build and maintain social links by housing
- Economics
 - Master the couple rent and maintenance charges over the time
- Health
 - Sanitary quality of the housing
 - Limit environmental impacts of buildings

5 strategic axes of OPAC 38 based on Agenda 21 process

1. Quality of services and internal reactivity
2. Diversification of housing offer
3. Fight against poverties
4. Production of dwellings for rent
5. Sustainable development and environment

Preparation for tendering

- Collection of energy data for all the concerned buildings (central heating, ~9 000 dwellings)
- Available data after several years preparation:
 - Energy consumption, incl. climatic correction
 - Energy costs, incl. operating and maintenance
 - Ratios, allowing comparison between different heating systems
- Complete synthesis produced each year

Purchasing process

- Public tender for a contract of 10 years
- Divided into four batches (widespread territory + dwellings supplied by dh)
- In total 2000 - 2010 contracts
- Consumption target for each boiler house (according to previous results)
- In case of new boiler or refurbishment adjustment after one year functioning
- Renegotiation clause if real consumption too low
- No negotiation possible

Contract content

- Energy procurement (P1): delegation of payment (gas+dh), fuel and LPG with limited increase formula
- Operating and maintenance (P2): fixed basis
- Important repair, replacements (P3): annually fixed amount, with dedicated account
- Incentives:
 - P1: after climatic correction
 - if over target OPAC 38 pays 1/3 of over-consumption
 - If under target OPAC 38 gets 2/3 of saving
 - P3: at end of contract (and installations in good shape)
 - Over spending ESCO gets only 1/3 of additional costs
 - Under spending ESCO keeps only 1/3 of saved costs

Results of O&M contracts with incentives

For year 2004 considering climatic conditions:

- Base line for energy consumption: 101.8 GWh for 8905 dwellings
- Actual consumption: 97.8 GWh
- Expenses: 3.77 m€ energy + 0.56 m€ operating and maintenance
- Savings: 58 k€

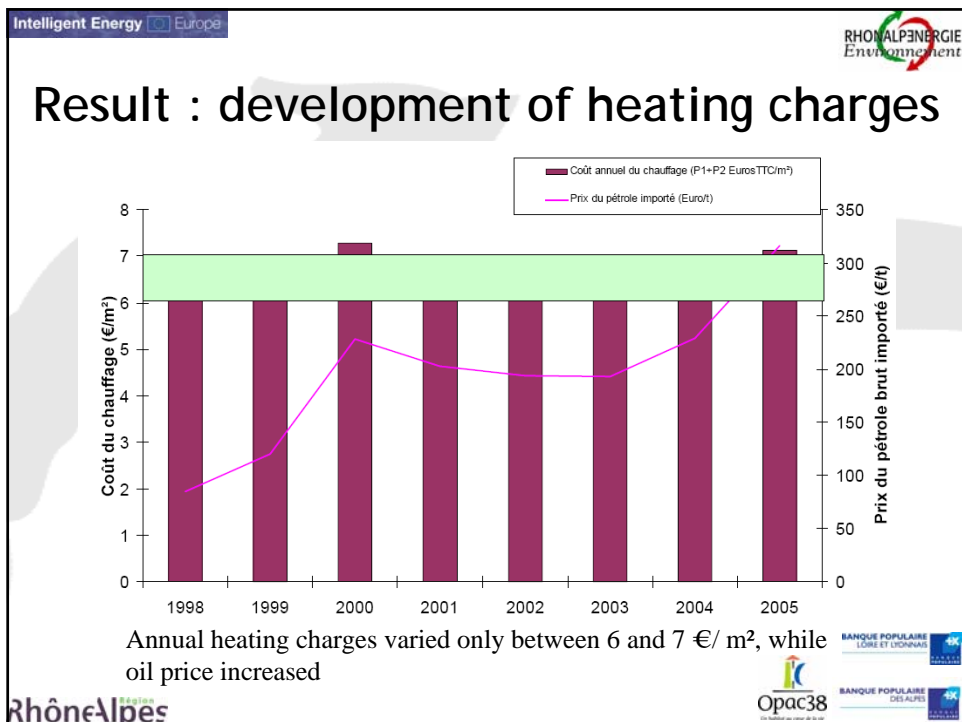
Opportunities and limits of O&M contracts with incentives

Limits:

- No saving (energy or expenses) guarantee
- No investment with performance guarantee (only partial possible with P3)
- Energy saving potential of "soft" measures mobilised soon
- Complaints for non respect of 20°C indoor temperature

Opportunities

- ESCO is highly interested to manage well (additional income)
- ESCO may propose low-cost optimisation measures
- Limiting energy charges for tenants
- Good starting point for real EPC



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- ## Aspects to be considered for public body
- Detailed knowledge of energy consumption data and main building data by internal technical services
 - Clear limits for the services outsourced,
 - Clear reference baseline and procedure how to take into account utilisation changes and price variations
 - Close follow up of contract(s) by own services and for certain aspects by external consultant
 - Close eye on renovation budget, if outsourced
- Rhône-Alpes
- BANQUE POPULAIRE LOIRE ET LYOIS
- BANQUE POPULAIRE DES ALPES

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Information on Internet

European gateway : www.pubenefs.org

PU Benefits
How to use Energy Efficiency Services in Public Buildings?

-Summary

This project intends to develop a suitable management framework for assisting **public bodies** and especially **local authorities** to **implement energy services including energy efficiency**, and thus to **enhance the market** of energy efficiency and energy services, by providing **efficient tools** to **meet the needs** of public bodies and facilitating the work of ESCOs. The major outcome of this action would be an increased number of **public bodies using energy services**.

Opening of energy markets and use of energy services represents a good opportunity for local authorities to include energy efficiency measures in their management, but several problems can occur, such as lack of knowledge of existing mechanisms, as third party financing, specificities inducing difficulties to implement energy services (legislation, accounting schemes etc), risk of losing the knowledge in the energy consumptions.

Concrete assistance will help the local authorities overcoming their **non-technological barriers**, to create a new market for energy services and thus **realise** the high energy **efficiency potential** in their building stock.

Work will start with studies on the specificity of public bodies, their legal framework and capacity for third party finance contracting. In total fourteen feasibility studies will identify the specific problems and solutions for implementing energy services. Elaborated specifications will assist local authorities for their tenders to implement energy services, allowing having the **best offer** by ESCOs.

As the **quality of contractual relationships** is crucial model contracts will be elaborated, taking into account the acquired know-how in Europe, in a way those public bodies can **adapt** them rapidly. Tools (brochure, CD-ROM, web sites) will be produced in seven languages facilitating the implementation of energy services.

The dissemination will ensure an efficient replication of the work carried out directed to the target groups while associating the key actors (**specific advisory committees**). Organisation of **training and dissemination seminars** at different levels completes the promotion. In this way the project will be able to increase the number of public bodies and local authorities decision to

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PU Benefits
Comment mettre en place des services d'efficacité énergétique pour les collectivités locales?

-Présentation du projet

Ce projet a pour objectif de développer un cadre pour aider les organismes publics et plus particulièrement les **collectivités locales** à mettre en place des **services d'efficacité énergétique**. Il vise en particulier à favoriser le développement de ce marché en fournissant des **outils efficaces** pour répondre à la demande du secteur public et ainsi faciliter le travail des entreprises de services en efficacité énergétique.

Le recours aux services énergétiques, qui se développe en particulier dans le cadre de l'ouverture des marchés de l'énergie, est un moyen pour les collectivités locales d'échapper dans leur gestion des mesures d'efficacité énergétique. Cependant plusieurs problèmes peuvent se présenter tels que le manque de connaissances des mécanismes existants comme le tiers financement, les spécificités de la commande publique, la réglementation, les risques de ne plus maîtriser les consommations de ses consommations d'énergie,....

Une assistance concrète aidera les collectivités locales à surmonter ces barrières non technologiques pour créer un nouveau marché des services d'efficacité énergétique et atteindre ainsi un haut potentiel d'efficacité énergétique dans les bâtiments, enjeu clé dans la maîtrise des émissions de gaz à effet de serre.

Le travail, dans 8 pays (France, Royaume-Uni, Allemagne, Autriche, Espagne, Suède, Finlande, Irlande) comprendra des études sur la spécificité des organismes publics, le cadre légal et la possibilité de tiers financement. Des études de faisabilité identifieront les problèmes et solutions spécifiques pour la mise en place de ces services. Ces études pourront être conduites, si la Région le souhaite, sur son propre territoire.

Un cahier des charges précis aidera les collectivités locales dans l'élaboration des appels d'offres pour la mise en place de services énergie permettant ainsi d'obtenir les meilleures offres. Comme la qualité des relations contractuelles est essentielle, des modèles de contrat seront élaborés, en prenant en compte le savoir-faire acquis en Europe, et de telle façon que les collectivités puissent

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Thank you for your attention!

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