

Optimizing energy consumptions in central governmental buildings: example of an EPC in France

Core theme 4

WG 4.2

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- **August 2009 - Grenelle Law:**
 - Objective of a 40% decrease in the energy consumption of State buildings by 2018
 - Energy Performance Contracting recognized as one of the possible instrument available to reach this target
- **Mai 2010 :** Launching of an experimentation frame on EPC as a service contract on local governmental buildings by the Environment Minister
- **September 2012:** EPC signed by the Prefecture of North (State representative in the Region)

Results from a cooperation between:

- The DREAL Nord Pas de Calais (Ministry of the environment representatives in the Region) => regional coordinator of the experimentation
- the DDTM Nord and Pas de Calais (Ministry of the environment representatives in the Department)
- the CETE Nord Picardie, a Technical Center
- the Prefecture

- **Following an energy audit**, the site was identified as:
 - Equipped with several heat and cold production systems, and a centralized management
 - Presenting an important energy saving potential without needs for insulation work

By improving the energy management and optimizing regulation, a 15% decrease in energy consumption seemed reachable
- **September 2011: Beginning of the competitive dialogue** with 3 candidates, focusing on:
 - The technical scope,
 - The proposed level of performance for guaranteed savings,
 - The measures and verifications procedures,
 - The level of service,
 - The price.
- **End of summer 2012: the remaining 2 candidates proposed a 15% energy saving target**, working on heating and air conditioning systems
- **1st September 2012: EPC signed with the most competitive candidate**

Form and content of the contract



- EPC under the form of a service contract:
 - replaces the usual maintenance contract
 - Adds a total guarantee
- Object of the contract for the contractor (ESCO):
 - Maintain the equipment and installations put at its disposal (which are its property for the length of the contract) under its whole initiative and responsibility
 - Generate energy savings benefitting to the State during the length of the contract
 - By optimizing, modifying or replacing the equipment
 - While limiting costs and respecting acceptable conditions of occupancy within the building
- Obligation of results, verified by specific M&V procedures.
- Remuneration:
 - A forfeit part, corresponding to the maintenance part of the contract
 - A variable part, linked to the achievement of the agreed performance

Objectives and expected results



- Initial conditions:
 - 18 300 m² on 3 buildings (2 buildings built around 1750 and refurbished in 2006 and one built in 2006)
 - Electricity consumption: 1 352 400 kWh/year
 - Heat consumption: 2 069 000 kWh/year
 - Energy consumption costs: 200 000 € /year
 - Contract P2 : 36 000 € T/year

- Contractual objectives:
 - 15% decrease in energy consumption over 5,5 years
 - ↳ 2 575 000 kWh of energy savings guaranteed over the period

- Financial aspects:
 - A service contract amounting to 310 000 €
 - => a forfeit part for maintenance and a variable part depending on the achievement of energy savings
 - An EPC that will trigger a saving of almost 60 000 € on the Prefecture energy bill over the period.

Conclusions



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↳ Most important contract of that type signed for a State building in France in terms of surface covered (11 on-going).

An ESCO free of its action to reach the agreed target on the project scope

↳ Importance of the competitive dialogue procedure!

Thank you for your attention!



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