



## P.L.A.G.E

# (PLAN LOCAL D' ACTIONS DE GESTION DE L'ENERGIE/ LOCAL ACTION PLAN IN ENERGY MANAGEMENT)

In less than 4 years time, P.L.A.G.E. program allowed up to 20% energy consumption reduction in building stocks, without major investments.

### SUMMARY :

The managers of buildings seldom have the “energy” reflex in the management of installations, the design of new buildings or in refurbishing older buildings. However, there is **a huge potential for making profitable energy savings**; more significantly, as energy prices are likely to increase in the mid term.

Examples at the local level show that it is possible to improve the energy efficiency of buildings without having to make major investments. An active policy of energy management implemented on the whole patrimony makes it **possible to achieve a reduction in energy consumption of between 15% and 20% without any loss of comfort over a period of 3 to 4 years**.

The objective of P.L.A.G.E is to do away with factors such as the wait and see style of energy management (which consists of only intervening when something breaks down), irrational management and the scheduling of investments without reflecting on their technical and economic effectiveness. The presence of an “Energy Manager” (“Responsible Energie” in French), whose task is to coordinate and conclude the objectives of the P.L.A.G.E. is essential for this reason.

The P.L.A.G.E. programme is a multiannual demonstration programme for better energy efficiency management of buildings. P.L.A.G.E. consists of different calls for three year pilot projects targeting specific building stocks.

### MAIN OBJECTIVES:

- To reduce greenhouse gas emissions achieved through energy savings (with an objective of between 15% and 30%) resulting from better energy efficiency management of buildings.
- To make administrators and managers aware of their building stocks and their energy saving potential.
- To incorporate permanent efficient energy management in the decisional chain (links between technical and financial services and communication up to the administrators).





## SPECIFIC TARGETS:

The targets are all private or public bodies/institutions, owners and/or managers of important building stocks or buildings with huge energy needs (minimum = a total energy bill of about €500,000 per year, so a 15% reduction in energy expenses could finance the annual salary of an Energy Manager (salary of +/- €75,000 per year in Belgium)).

Each P.L.A.G.E. is a pilot project for a specific building stock; the P.L.A.G.E. projects are selected with the aim of demonstrating the interest and financial viability of effective building energy efficiency management.

Since 2005, Brussels-Environment has contributed to the implementation of P.L.A.G.E projects and there are thus seven municipalities which have been involved in a P.L.A.G.E. project since 2006 and five hospitals since 2007. Eight other municipalities and two collective housing associations have been involved since 2008 and the school networks since 2009. The short term objective is to extend the P.L.A.G.E process to any building stock manager.

Some results obtained from the implementation of a P.L.A.G.E. project in some Brussels municipalities are given below:

- **Molenbeek-St-Jean:** Priority given to nine buildings accounting for 51% of the total gas consumption and 62% of the total consumption of all municipal buildings. These nine buildings achieved a total fuel reduction of 16%.
- **Saint-Gilles:** Pierre Paulus School: 10% fuel reduction between 2005 and 2008 thanks to the replacement of a HT transformer and the separation of the heating circuits (school and caretaker's lodge).
- **V. Boin swimming pool:** following the installation of thermal solar panels, a condensation boiler, and the replacement of pumps and the ventilation system (with heat exchanger), the reductions achieved between 2005 and 2008 were -39% in fuel and -24% in electricity.
- **Watermael-Boisfort:** Compared to 2004, consumption dropped by 20% in 2008 (representing an equivalent saving of €140,000 on the annual expenditure and a saving of 588 tons of CO<sub>2</sub>).

As for the P.L.A.G.E. hospitals, energy consumption in the five hospitals fell by 8.3% a year in only three years time (2007-2009), which represents a saving of more than 3,500 tons of CO<sub>2</sub>, or the equivalent of 8,400 Brussels households reducing their annual consumption by 10%.

The energy savings for the five hospitals (in terms of costs) represent more than €1,200,000 a year.

The effectiveness and the profitability of local action plans for the management of energy consumption have been demonstrated by the P.L.A.G.E. programme. All large buildings and major energy consumers will now be obliged to implement such an action plan and recruit an "Energy Manager".

## CONTACT PERSON:

Julie Spies – [jsp@ibgebim.be](mailto:jsp@ibgebim.be)

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