Methodology of a Local Plan to Manage Energy (Production and Consumption)

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ABSTRACT

This project aimed at developing a methodology to help the Local Authorities and the town managers to carry out suitable policies in order to save energy and promote the use of renewable energies. This methodology will be useful too for the civil servants in charge of following and assessing the local actions granted by the Regional Authorities. It will take the form of a practical guide of management.

The main objectives of the guide are:

• To provide and disseminate an operational method to help step by step the municipalities, including the smallest ones, to develop their own overall suitable plan to manage energy on its area;
• To improve the exchange of information and the collaboration between the different departments in charge of or related to energy saving in a town so that energy concerns will be taken into account by all the actors;
• To create a dynamic of continuous improvement based on an assessment of the efficiency of fulfilled actions.

KEYWORDS

Energy, municipalities, management, practical guide, area.

INTRODUCTION

Recent statistics show that the domestic\(^1\) energy consumption in Belgium is almost the largest in Europe, among others because of a significant old building stock and the general low insulation level of the buildings. For a few years, the Walloon Regional Authorities have realized the energy saving potential and they have started different programmes to promote energy savings and the use of renewable energy, notably intended for the municipalities.

However, the Walloon municipalities seem to keep being unaware of the important part they can play in the initiatives for energy savings. Indeed, they have at once a role of:

• Manager of a more or less large building stock (town hall and various municipal offices, schools, swimming pool and other sports facilities, public library…). Then, suitable investments in order to save energy could generate considerable

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\(^1\) Domestic = domestic and related (sectors) = residential, tertiary and agriculture
economy for municipal finances, an increase of the comfort for the occupiers, a gesture for environment and could also set an example to the citizens.

- Regulator and planner by means of urban planning tools. The municipalities can include in their local plan and in their urban planning rules, special measures and prescriptions to favour energy savings and the use of renewable energy. Moreover, if the town has a strategic plan, it can direct the local development in order to have an integrated energy management on its area.

- Actors of proximity who can motivate their citizens, especially people just about to build or renovate and also their employees or pupils in the local schools, to save energy, through awareness campaign...

So a methodology to help municipalities to manage globally energy seems very useful and the Regional Authorities have agreed to fund the development of a guide.

**METHOD OF APPROACH**

A standardised questionnaire sent to all 262 Walloon municipalities has allowed us to identify their needs but also to heighten, in an indirect way, local actors’ awareness of energy management. This survey is being supplemented by conversations with a politician and various people in charge of energy in six pilot municipalities. These ones have been selected according to their size (number of inhabitants), their location and their participation or not in an “energy programme” granted for the Regional Authorities, in order to represent the whole Walloon municipalities.

The interviews and the results of the mailing are analysed in order to extract the town energy managers’ expectations and identify the main themes that need to be developed in the guide.
An international literature review is also carried out in order to gather best practices and several methods to calculate the total yearly energy consumption of an area, and enrich the guide.

The guide will be developed in close collaboration with the six pilot municipalities: it is a participative method based on discussion, collection of local and regional available energy data, research and hypothesis about missing data, practical check of the relevance and the operational nature at different stages of the project. See Figure 1 for a summary of the method of approach.

RESULTS

Results of the survey

The reply rate is very satisfying for a not compulsory survey: 44 % of the Walloon municipalities have sent back their questionnaire filled in.

The main results of the survey are:

• Energy does not still seem to be a Local Authorities’ priority: less than 30 % of Walloon municipalities say they have a deputy burgomaster in charge of energy.

• Municipalities that have appointed a person in charge of managing energy get better results than the other ones.

• In general, it is noticed that Walloon municipalities have a poor knowledge of Regional grants and aids particularly, and underuse them. The survey also shows paradoxes in the use of tools to monitor energy consumption of building: a certain number of municipalities underutilize their potential. It would seem that, once it has installed such tools, the municipality does not realize the relations between them. Some other tools are not widely known so that a certain number of cities have mixed up them. For example, 9 % of municipalities have mistaken the mechanism of third investor for Regional grants or bank loans.

• Few municipalities record their yearly energy data and, if they do it, in most cases, they record the amounts of bills and not the consumption figures. What is more, very few towns compare them with the figures of previous years.

• Very few municipalities have taken measures as regards town and country planning despite the very good cost-effectiveness ratio of such policies.

• The survey reveals the pluses of the participation in the Regional subsidized PALME programme (Program of Local Actions to Manage Energy). The municipalities that take part in it know better and use more Regional grants, aids and tools to monitor energy consumption. What is more, they are proactive as regards heightening citizens’, SMEs’ and all the stakeholders’ awareness of energy management. That probably results from both the plan of actions that those municipalities have to draw up and carry out, and the financing, by a
regional grant, of a person in charge of energy projects. Generally speaking, PALME municipalities look quite dynamic in different fields.

- Finally, some cross-checking between information gathered by the survey and official databases have shown “a lack of memory” in municipalities, especially about the use of grants. The general organization of municipal staff can account for this: only the local tax officer and the town clerk have a horizontal view of the local actions. But, the variety of staff members who filled in the questionnaire is quite large… This “lack of memory” can also result from the turnover of specific employees paid by temporary subsidies.

Results of the first interviews in two pilot municipalities

First interviews and work in pilot municipalities have already revealed some blocks and brakes on management of energy:
- There are generally very few exchanges of information between the different town’s departments and there is a lack of communication between the members of the staff, including in very small municipalities.
- There is not a will of the Local Authorities to inform the whole staff about the broad local political lines.
- Energy management is not often the priority of Local Authorities because the positive effects of such a policy appear in the mid- or long-term, are not enough visible and not assessed.
- Owing to a shortage of staff, some people are put in charge of dealing with energy issues in addition of their other remit. In fact, they do not have time to do it conscientiously.
- Presently, various difficulties limit the use of municipal energy data. Actually, they are very hard to get for recording medium, filing, availability and interpretation reasons.

In both these towns, employees would like to know what is doing within their municipality and they would be proud to take part in the local actions in favour of energy saving for instance.

Results of the literature review

Literature study has shown, among others, that
- Municipalities enjoy working in networks as they can learn from one another;
- Municipalities compete for fame and recognition of their efforts.

CONCLUSIONS AND DEVELOPMENT

The results of studies have already shown that the Local Authorities’ support is essential to the development of a local energy strategy in the long term. This one should be based on the assessment of the efficiency of fulfilled actions. What is more,
• Municipalities should appoint a person in charge of energy management who has a horizontal view of the local actions, who can spread information within the different departments and follow energy projects.
• Municipalities should manage and record their energy data in such a way to make easier their use.
• Existing tools have to be explained; monitoring tools, especially, have to be rationalized.

The practical guide is under development. It is based on the results of those different studies and on some work still ongoing in pilot municipalities. It will be illustrated with practical examples; it will offer several levels of reading (according to the time you can spend) and different entries. See Figure 2 for its framework.

Figure 2: Framework of the practical guide
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