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Promoting Energy efficiency to Local Organisations
through dissemination Partnerships in Europe
Best Actions for Collaboration in Countries
for a High efficient Use of energy in Structural funds

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WinCEM: software for municipal energy management - Catalonia - Spain

ICAEN (Institut Català d'Energia, the regional energy agency of Catalonia) has developed, promoted and distributed a computer programme named WinCEM aiming at facilitating the task of energy management within local authorities.

Target Groups	Sector	Field
<ul style="list-style-type: none"> - Local authority - Regional authorities - Decision makers 	<ul style="list-style-type: none"> - Buildings (including municipal properties) 	<ul style="list-style-type: none"> - DSM - Monitoring & Management - Information

ANALYSIS

CONTEXT

WinCEM was created to answer to the need expressed by several municipal energy managers in Catalonia who, prior to the development of this programme, were managing their energy consumption by means of own created spreadsheets designed according to their specific requirements. With the application of this programme, an homogenisation of all these spare procedures was possible. An additional added value of the programme is that it has been user-friendly designed and frequently updated, also thanks to the users suggestions and proposals.

For this reason, since the first version of the software was prepared, some specific presentation/discussion meetings with Municipal technical staff have been organised in order to test the programme and to collect from its practical application suggestions and modifications to improve it.

The provision of this software is free and included within one of the five services lines offered by ICAEN by the mean of its Energy Advising Programme (Programa de Asesoramiento Energético –PAE-).

PROJECT DESCRIPTION

WinCEM is a tool to detect problems (evaluate energy situation and detect irregularities and over-consumption) and the first step of a chain of activities aimed at improving energy efficiency in municipal installations. More in detail it aimed to:

1. Evaluate energy situation, through an inventory and an energy data gathering about energy consuming plant and equipment and the formulation of an energy balance. WinCEM stores the data from the inventory in a part corresponding to the Centres of Consumption.
2. Once finalised this first step, the programme allows to define realistic and achievable “energy targets” by comparing operating consumption and standard consumption levels and then to detect irregularities and over-consumption.
3. This information is then used to draw up a report on results to different municipal departments, ending with a list of specific measures, backed up both in economic and energy terms, allowing actions to be prioritised.
4. After having applied this tool, the ICAEN also offers the possibility to realise an energy audit (both in public buildings and street lighting) in order to quantify the needs and the possibilities to be taken into consideration and then to propose a solution considering the economic and energy perspective.

This programme has been operating since 1997. Now, four different and improved versions are available, the last of which was launched in March 2002.

The software was structured, in its original version, in four modules, while its latest one (WinCWEM 4.0Euro) results of a number of improvements, contains a menu with 5 main options: reports, alarm, data import, energy tariff simulator, local network.



Logotype of the programme



File containing the Software and its instructions

COST AND BENEFITS

EVALUATION IN TERMS OF COST AND BENEFITS

At the end of each year a review report on the implementation of the programme is published, including number of requests and visits, implemented projects related with WinCEM, changes made, etc, and settling objectives for the following year.

In March 2001, 145 Local Authorities in Catalonia and 30 shires (sub-regional) administrative entities were applying this programme.

These figures, at the end of 2001, show that the 18,4% of the region Councils had a copy of the software and a 64% of them were using it; in other terms, 31% of the Catalan region population lives in towns or villages in which an energy management is realised with the help of this tool.

Those percentages are in continuous growth, including in the last year some big towns of the region and more "Shire Councils" which are administrative structures managing areas comprising several towns and villages.

The information about the availability and the characteristics of the programme was largely disseminated by the technicians and the ICAEN Website; the result of this promotional work was in the spreading of its utilisation and in the diversification of the typology of user (recently not only Councils asked for it but also Universities and other entities)

It has been estimated that a correct use and application of this software, whose cost has been covered by the ICAEN with a support of the EU Innovation Programme, can lead to a reduction of the energy costs between 2% and 5% in each Municipal area only by applying operational improvements suggested by the programme and without investment.

COMMUNICATION

Very diversified communication channels have been set up. Some of them are specifically conceived to disseminate information about the programme itself and other also to maintain a feedback about the state of implementation of the programme in those Councils using it.

Regular Workshops on municipal energy management systems organised by the ICAEN have been very useful to share technicians comments in this regard.

An essential success element is the visit of the ICAEN technicians to those councils asking for a WinCEM installation who received a short smattering of the programme. This kind of technical services is also available if operating problems do occur. It has been noticed that in order to guarantee the success it is essential that people working in Councils knows there is a person to be in touch with in case problems arise. If the programme is sent by mail without any technical assistance service to install it, it is frequent that it is finally not installed.

There are some publications (see references) and also a Website informing about the programme. Besides, a number of workshops have been organised and publicised both to programme users and the non-users ones. Moreover, a brochure about WinCEM and energy management systems is under preparation.

An ad-hoc communication network does not exist, but the programme users have e-mails of the other users and there is evidence of close communication among them.

COLLABORATION AGREEMENTS

The programme is delivered by the ICAEN free of charge to councils and other entities both public and private. In the case of public entities, the signature of a collaboration agreement is an indispensable requirement. This guarantees on one side a correct utilisation of the tool and at the same time it provides a mean to monitor its application within the interested areas.

Besides, it is expected to reinforce the international dimension of this programme: new contact are ongoing with Maghreb countries and also Latin America to implement the programme in local LA.

MONITORING

Thanks to the agreement signed among ICAEN and councils, there is the option to ask for a security copy of the database so that data about municipal consumption (litres/person; kWh per lamp; m3 natural gas/person...) and lighting (kWh, kWh/m2 street) can be obtained. Thanks to this data-gathering the annual summarising report about the evolution of the programme implementation is drawn up.

PARTNERSHIP

MAIN STAKEHOLDERS AND COMMUNICATION STRUCTURES AND NETWORKS

Main stakeholders are the municipal technicians, responsible for municipal energy management or subcontractors working for the Councils in the maintenance of the installations. In the case of small councils, the competence is assumed directly by the Mayor.

The programme has been specifically designed by ICAEN, for the technical staff of the Municipal Authorities although if recently many other entities have asked for a copy of the tool in order to evaluate its possibility of application within their structure.

RECOMMENDATIONS

KEY POINTS

WinCEM has demonstrated to be a great success and this is confirmed by the continuous growing of its application. The reasons of this can be found in the attention paid by the ICAEN in detecting a real need at Municipal level and thus setting up a friendly instrument to detect energy problems and provide a set of possible solutions.

Another important factor of its dissemination has also been the tailored assistance the ICAEN technical staff offered to the Municipal users, which encourage them to apply and use the programme demonstrating its objective advantages.

In other terms, Energy Management, which is so perfectly integrated within the industrial context has been transferred to a more reluctant Municipal framework by the mean of a wide dissemination and a close assistance to the users.

Also some relevant detected problems, relative to lack of time and human resources have been solved by the introduction, in the last version, of automatic procedure for importing data and automatic alarm system to detect irregularities in order to analyse only problematic centres of consumption.

By means of this, it has been possible that only one person manages the programme.

TO KNOW MORE

USEFUL INFORMATION

List of Publications

WINCEM: A COMPUTER PROGRAMME FOR MUNICIPAL ENERGY MANAGEMENT (WINCEM: UN PROGRAMA INFORMÁTIC PER A LA GESTIÓ ENERGÉTICA MUNICIPAL) /

ICAEN /

Revista de Eficiencia / Energética nº 145/pp 5-6 /

1998

List of Internet sites

Catalonian Energy Agency / Institut Català d'Energia (ICAEN) / <http://www.icaen.es>

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