THE CREFEN DATABASE – A WAY OF PROMOTING THE ENERGY EFFICIENT APPLIANCES IN THE RESIDENTIAL SECTOR

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SUMMARY

At present, the residential sector has a great potential for reducing the energy consumption through the introduction of new advanced methods in energy management. At the residential sector level, the energy consumption is mainly directed to the lighting and domestic appliances. In this sense, the aim of CREFEN project - a Research of Excellence (Ceex) Project - is to achieve an integrated software system able to meet the most exigent requirements concerning the energy efficiency and saving in the residential sector. This project presents a multi-disciplinary character and involves specialists in energetics, software designing, environment and statistics. Till the final stage of the project (autumn 2008), the software system will be performed in the following successive stages: elaboration of the solution, preparation of the databases, software drawing-up, experimental trials, applications, training and applications for consumers (Alexandru et all. 2006).

The CREFEN database contains the following articles: (a) all white goods appliances currently stocked by the manufacturers or by the retailers in each country which are or will be energy labeled by EU; (b) all energy efficient models (A-C) manufactured by the suppliers of each EU country; (c) consumer electronics and office equipment; (d) appliance groups which have recently been labeled - ovens, lamps and room air conditioners. Each appliance type and model has a set of information extracted from the EU energy label and information fiche that provides information which enables one to characterize a particular appliance model and to compare with other model. The following information is generally supplied: (a) energy efficiency rating on an A to G scale with A being the most efficient and G the least efficient: for cold appliances two more ratings have been added above the A rating, A+ and A++ which is the most efficient energy rating; (b) energy consumption per year (or cycle); (c) water consumption per cycle; (d) volume or capacity; (e) other performance criteria like washing or drying capability; (f) noise emissions (voluntary). In addition, a data acquisition sub-system with a specific web-based interface was also designed for centralizing the main features of the domestic and lighting appliances (http://crefen.ssa.valahia.ro) (Bîzoi et all. 2007).

BIBLIOGRAPHY