



DEEP (Dissemination of Energy Efficiency Measures in the Public Buildings Sector) *ICLEI – Local Governments for Sustainability, Germany*

Summary

DEEP, is a European project funded by the Intelligent Energy Programme, aimed at encouraging higher energy efficiency standards in the public buildings sector through procurement actions. 11 European partners participated.

Principally aimed at those responsible for procurement, construction and the environment and European public authorities, DEEP has developed a range of practical tools to assist in implementation. These include guidelines on the procurement of energy efficient buildings and building renovation, criteria for the purchasing of green electricity and energy efficient office products, guidance on developing energy efficiency policies, tools for integrating life-cycle costing (LCC) into public procurement, and carrying out a self-assessment of possible energy efficiency improvements in public buildings.

End-user area

- New buildings
- Refurbishment of buildings
- Transport and mobility
- Financial instruments
- Industry
- Legal initiatives (regulations, directives, etc)
- Planning issues
- Sustainable communities
- User behaviour
- Education
- Other

Target Audience

- Citizens
- Households
- Property owners
- Schools and universities
- Decision makers
- Local and regional authorities
- Transport companies
- Utilities
- ESCOs
- Architects and engineers
- Financial institutions
- Other

Technical

- Energy efficiency
- Heating
- Cooling
- Appliances
- Lighting
- CHP
- District Heating
- Solar energy
- Biomass
- Wind
- Geothermal
- Hydro power
- Other

Context

Buildings are major consumers of energy contributing to some 40% of final energy consumption in the European Community alone. EC research has indicated that by improving energy efficiency, carbon emissions from buildings and related energy costs could be reduced by 42%. Public buildings therefore have an important part to contribute to this potential.

Each year public authorities spend billions of Euros on renovation and the construction of new buildings, together with the electricity consumed to run them, and the energy consuming products used within them.

Through introducing relatively simple environmental requirements in the procurement of such works and goods, huge energy efficiency benefits can be achieved. However, public authorities across Europe are generally not well informed about this potential, and lack the tools to implement such improvements in practice.

The DEEP project aims to tackle both these hurdles, through awareness raising and the development of tools, within the context of the Europe-wide implementation of the Energy Performance of Buildings Directive (EPBD).



Objectives

To promote opportunities in improving the energy efficiency of the public buildings sector, following EPBD implementation, through procurement activities. This will be achieved by:

- Developing a range of practical tools to assist public authorities in implementation: guidelines for energy efficiency in new buildings and major renovation works, purchasing criteria for green electricity and energy-consuming office products, all with a view to the latest market developments
- Promoting the opportunities in improving energy efficiency through high environmental standards for public office buildings at a series of regional awareness raising events
- To highlight and “sell” achievements of public authorities leading by example actively to citizens and interest groups through the Procura⁺ Sustainable Procurement Campaign

Process

The project partners consisted of a group of energy efficiency, LCA and green electricity experts, together with a group of public authorities from right across Europe (the UK, Sweden, France, Spain, Italy, Greece, Austria and Germany). Building on this wealth of knowledge the main stage of the project was the development of guidelines on how to carry out sustainable new construction and renovation work, together with advice on the purchasing of green electricity. During the project the use of sustainable building materials was also considered alongside the energy performance of buildings. Existing guidelines for energy consuming office products were also updated and incorporated into the package of tools.



Round-table: Energy efficient construction

Three expert workshops were organised (on energy performance, sustainable building materials and green electricity), at which detailed background discussion papers were discussed. On the basis of this input and further rounds of direct expert consultation, a series of guidelines and purchasing criteria were developed. The guidelines were to be useable by any public authority within Europe, no matter what level of experience or knowledge.



Although many of the principles of sustainable construction are the same throughout Europe, the framework conditions differ substantially, not only in terms of climate, market and experience, but importantly also in terms of calculation indicators, methodologies and minimum standards for energy performance, due to the flexibility allowed Member States in the EPBD. As such, rather than a single set of recommended standards for sustainable construction, a range of different options were proposed, with the choice of the most appropriate depending on both the national framework conditions and the experience within the authority.

Additionally an Energy Efficient Procurement Toolkit was developed. This included (as well as the above guidance and purchasing criteria) a guide on developing and implementing an energy efficient procurement policy, and tools for integrating life-cycle costing (LCC) into public procurement, and carrying out a self-assessment of possible energy efficiency improvements in public buildings.

As well as the Toolkit, all the results were included in the Procura⁺ Manual, A guide to cost-effective sustainable public procurement, which also contains further information on the implementation of sustainable procurement. This manual is now available free-of-charge in English, French, German, Italian, Greek and Catalan.

A series of regional dissemination events have taken place in Greece, northern Italy and Catalonia for public authority staff and decision makers, to increase awareness of the topics of energy efficiency and green electricity.

Financial resources and partners

Total project budget: €1.3 million – 50% funded by the Intelligent Energy Europe Programme, 50% own funding.

The project was co-ordinated by ICLEI – Local Governments for Sustainability. The partners were IFZ-Interuniversity Research Centre (Austria), Auxilia (France), Energy-Environment-Local Development-EPTA (Greece), Università di Reggio Calabria, DASTEC (Italy), Ecoserveis (Spain), Diputació de Barcelona (Spain), Local Union of Municipalities & Communities of Attiki (Greece), Provincia di Cremona (Italy) and Växjöhem AB (Sweden), ESD (United Kingdom).

The local authority partners (Cremona, Barcelona and Athens) both provided end-user advice on the guidance being developed, and acted as the key regional dissemination drivers. ICLEI co-ordinated the activity at the European level. The other partners provided expert advice on the topics addressed by the project.

Results

Quantified figures on exact energy and financial savings achieved are not possible due to the nature of the activity.

The guidance and criteria developed is already being used by the local authority partners and their local partners, who confirm its practicality and usefulness.

6,000 Procura⁺ Manuals and 1,000 DEEP Toolkits have already been delivered in multiple languages to public authorities across Europe, a further 400 public authority decision makers have been directly addressed in regional awareness raising events in Greece, Catalonia and northern Italy.

It can be estimated that following the activity at least 200 public authorities will be influenced by the guidance developed towards improving energy efficiency in their public buildings.

Lessons learned and repeatability

The principle focus of the action was to develop guidance sustainable construction and purchasing criteria for green electricity and energy consuming products which could be used by any public authority in Europe – no matter what level of expertise.

Given the differing national regulatory frameworks for construction work and energy performance in particular, it was not possible to provide the unified set of sustainable construction recommendations initially planned –



instead guidance was provided with different options offered. It will not be possible to do more until there is more harmonisation of energy performance indicators, calculation methodologies and standards at the European level. However much experience can still usefully be shared across Europe, and the guidance produced will hopefully contribute to this exchange.

The purchasing criteria for green electricity and energy-consuming office products may be used anywhere in Europe (as long as there is green electricity offered on the market). The energy efficient procurement policy guidance together with the LCC and energy performance self-assessment tools are also applicable Europe-wide.

Feedback at the end of the project suggests that the final project publications are highly useful for the everyday work of European public authorities.

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Printed reports or other literature available:

The Procura⁺ Manual – A guide to cost effective sustainable public procurement, in English, French, German, Italian, Greek and Catalan downloadable from the project website above. For a free hard copy, please write to procurement@iclei-europe.org

The DEEP Energy Efficient Procurement Toolkit downloadable from the project website above. For a free hard copy, please write to procurement@iclei-europe.org