

Holistic Assessment Toolkit on Energy Efficient Retrofit Measures for Government Buildings

ANNEX 46

Research has previously shown that many existing government buildings are characterised by high energy use. In fact, older, energy inefficient buildings represent about 80% of the building stock, but about 95% of the energy use, so this part of the stock should be improved. Since government buildings are constructed similarly in many countries, experience gained with retrofitting such buildings with energy saving technologies should be widely applicable on an international scale.

The fact that energy saving measures are seldom applied when government buildings are retrofitted reveals that in many cases, decision makers simply lack knowledge of the many energy saving measures available to them, and of the efficiencies and return on investments that

such measures can yield. The current decision making process needs to be improved to confront the challenges of increasing energy costs and climate change, and to avoid 'locking in' long-term commitment to energy inefficiencies by adopting sub-optimal renovations.

The project, "Holistic Assessment Toolkit on Energy Efficient Retrofit Measures for Government Buildings" has improved the decision making process for energy retrofitting of government non-residential buildings, e.g. office / administrative buildings, dormitories / barracks, service buildings and production and maintenance facilities. Though the focus is on government buildings, many results can be applied to similar private sector buildings. Collectively, these building types represent a substantial part of the non-residential building stock.

PRODUCTS

- An Energy Assessment Guide for energy managers and ESCOs (energy service companies), including the results of pilot studies
- A database, 'Energy Saving Technologies and Measures for Government Building Retrofits'
- Best Practice Guidelines for Innovative Energy Performance Contracts
- An electronic interactive source book, 'EnERGo', supplemented by a book containing guidelines, best practice and case studies



Typical government buildings.

INTERNATIONAL ENERGY AGENCY

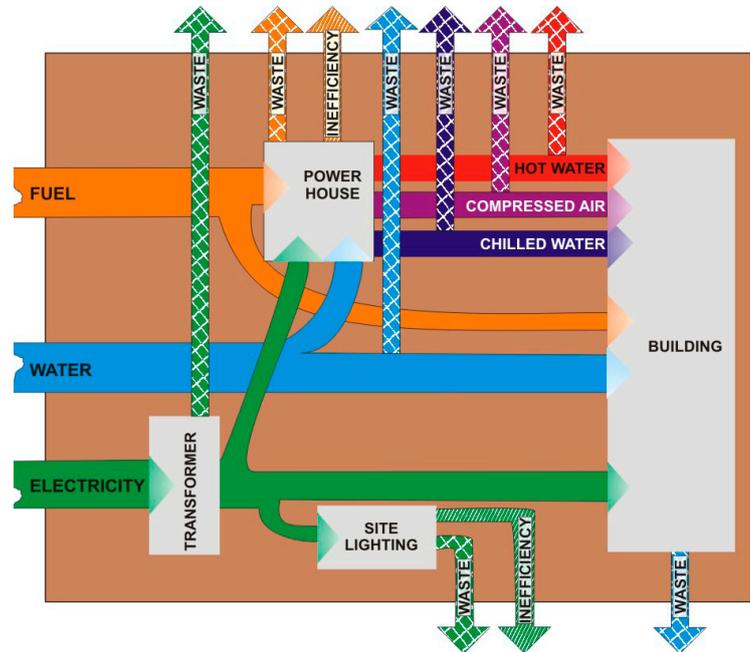
The International Energy Agency (IEA) was established as an autonomous body within the Organisation for Economic Co-operation and Development (OECD) in 1974, with the purpose of strengthening co-operation in the vital area of energy policy. As one element of this programme, member countries take part in various energy research, development and demonstration activities. The Energy in Buildings and Communities Programme has co-ordinated various research projects associated with energy prediction, monitoring and energy efficiency measures in both new and existing buildings. The results have provided much valuable information about the state of the art of building analysis and have led to further IEA co-ordinated research.

EBC VISION

By 2030, near-zero primary energy use and carbon dioxide emissions solutions have been adopted in new buildings and communities, and a wide range of reliable technical solutions have been made available for the existing building stock.

EBC MISSION

To accelerate the transformation of the built environment towards more energy efficient and sustainable buildings and communities, by the development and dissemination of knowledge and technologies through international collaborative research and innovation.



Possible areas of energy waste.

Project duration

Completed (2005 - 2010)

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Further information

www.iea-ebc.org