



# Annex 36 Newsletter

## Improving the Learning & Teaching Environment

International Energy Agency - Energy Conservation /Buildings and Community Systems (ECBCS)  
<http://www.annex36.bizland.com>

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### Annex 36 on the Coast of Sicily



*23<sup>rd</sup> – 25<sup>th</sup> April 2001*

The splendor of the sunrise over the Mediterranean each morning, made it difficult to concentrate on the contents of the Annex 36 meeting for the 15 in attendance. Our host, Umberto diMatteo, provided a breathtaking conference site

During the three-day meeting, presentations were made on progress on the four subtasks that will be used in the final development of the Annex's Objective – Concept Advisor for use by Decision-makers and

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### Getting to know ...

#### United States of America

*Second in a series of member country profiles*

Presently in the United States, over 118,000 K-12 schools and thousands of universities and colleges provide education to tens of millions of students across the nation annually. To support this education, billions of dollars (Euro) in energy is used annually. The majority of educational facilities in use were built before 1970 and are energy inefficient.

The U.S. Department of Energy has established a program, called Rebuild America aimed at improving the energy efficiency of existing buildings within five sectors of the typical community: K-12 Schools, Colleges and Universities, Housing, Commercial and State and Local Governments. The U.S. Department of Energy estimates that over 25% of the energy used is wasted. The label given to the K-12 Sector of the Rebuild Program is EnergySmart Schools.

The Objectives of Rebuild America for the K-12 and College and University Sectors complements the Objective of Annex 36 – Retrofitting of Educational Buildings. The Annex 36 Objective is to provide educational facility decision-makers and designers with tools and guidelines for energy efficient retrofitting (renovation) of existing buildings that will

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result in the improvement of the learning and teaching environment.

The objectives of Rebuild America K-12 Sector are to:

- ◆ Provide decision makers and designers with design guidelines document and documents to persuade various elements of the school community to incorporate energy efficient elements in the design for both new and retrofit projects;
- ◆ Provide the instructional materials to supplement existing lesson plans on energy sources and its use and energy efficient strategies;
- ◆ Incorporate alternative fuels in transporting of students to and from schools; to increase use of renewable energy sources; and
- ◆ Improve the indoor air quality of the learning and teaching environment while reducing outside emissions and pollution. The Rebuild America program also assists communities with the identification of financing options available to accomplish these improvements without impacting the financial bottom line. The design guidelines are aimed at both the retrofit (renovation) and new construction.

United States educational building construction will average over \$35 Billion (38.8 Billion Euro) over the next three years, with about 50% being retrofit (renovation) projects. If energy efficiency elements are not incorporated into these designs, then expenditures on energy will increase and pollution and other environmental impacts will result.

The United States contribution to the Concept advisor will include educational building case studies on use of various technologies from re-

newables (solar, wind, geothermal, biomass, etc) to existing and their impact on the learning and teaching environment. These will include case studies on use of Geothermal, Day-lighting, Rainwater Collection and use, photovoltaic and other solar uses. Retrofitting of HVAC, Lighting, Roofing, Building Envelope, and controls systems will be included in these case studies.

The U.S. Department of Energy's, Rebuild America Program and the IEA Annex 36 – Retrofitting of Educational Buildings are aimed at the same ultimate goal, the improvement of the learning and teaching environment for the children of the world in the 21<sup>st</sup> century. The combining of efforts, knowledge and resources of these two major organizations will increase the probability to achievement of this goal. ◀



#### **UNITED STATES REPRESENTATIVE**

The United States IEA Annex 36 representative is Lorenz V. Schoff. With 36+ years of Facilities management experience including 16+ years dealing with educational buildings, he is quite familiar with the instructional requirements and facility needs. Involved with energy management programs with both the U.S. military and public schools, provides practical experiences in operation and maintenance of all types of buildings, especially educational. He was selected as the U.S. Department of Energy's, Rebuild America Person of the Year in 2000. ◀

## Member Listing:

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Designers in formulation of their educational buildings. The Concept Advisor has been defined as an electronic interactive source book that will provide design concepts, case studies, technology information, decision tools, and design tools for the decision makers to evaluate the energy retrofit of existing educational buildings. This document will incorporate all educational buildings from pre-school through university levels.

The Palermo meeting also highlighted current energy-related research and projects for schools in the host country and the research staff made presentations. ◀

## Upcoming Meetings

<i>Date</i>	<i>Location</i>
October 22-25, 2001	Oak Ridge, Tennessee
April 2002	Oulu/Helsinki, Finland