



EU-Project C.L.A.Y.

(Cooperative Learning by Ambiental Activity)

6th project meeting 17. – 22. July in Schrobenhausen / Germany

Delegations from:

Cyprus
Italy
Greece
Germany

Thursday, 19th July

Responsible and coordinator for the program:
Architect Werner Friedl – www.architekt-friedl.de



Vor dem Passivhaus „Friedl“ in Adelzhausen. Oben links: Stylianos Marrogenidis (Griechenland), Angela de Giglio (Italien), Margarita Moese (Zypern), Johannes Fichtner, CLAY Koordinator Roland Schneidt, Josef Bichler, Bürgermeister Thomas Goldstein, Peter Mießl, Werner Friedl, Stelios Kakos (Griechenland), Panicos Athanassiou (Zypern). Von links sitzend: Christl Schneidt, Domenica Trentadue (Italien), Konstantinos Katrantzis, (Griechenland), Guiseppe Angiuli (Italien), Simone Bichler, Antonio Pacifico (Italien), Brigitte Streber (Bund Naturschutz).

Biogas processor with combined solar panels

We saw the first project at approximately 10 o'clock in the morning, near a small village "Schmiechen" for a biogas processor with combined solar panels. Mr. Bichler was one of the coordinators for realisation of this project.



Mr. Bichler, Sielenbach (Germany)

This combined biogas processor with solar panels on the roof of the storage area for biomass were avowed by Mr. Bichler and one of the owner of this processor. The asset in service is one of the biggest in the county. Five organic farmers are responsible for the processor.

Engineering figure: biomass processor

- 333 kW output of electric current (2.500.000 kWh/year)
- Otto engine with biogas
- Standing fermenter (1500 m³)
- Five organic farmers fill the fermenter
- Predominantly filled with clover
- Approximately 600 kW output of unused heat energy
- Beginning of operation Dec. 2005

Engineering figure: solar panels (PV- facility)

- 430 kWp (peak-output)
- Global radiation 1304 kWh/m²
- Number of panels 2016 type: City-Solar PQ 200
- Four power inverter type: solar max 100 C
- 493.000 kWh output of real electric current in the first year
- Beginning of operation Oct. 2005

Living in a passive house is like living in a thermos flask - Passive House in Adelzhausen

At 11 o'clock we drove to a passive house in Adelzhausen. It is the personal living and working house of Architect Friedl. This often publicized Passive House was built in the year 2001 and was one of the first passive houses in southern Germany.

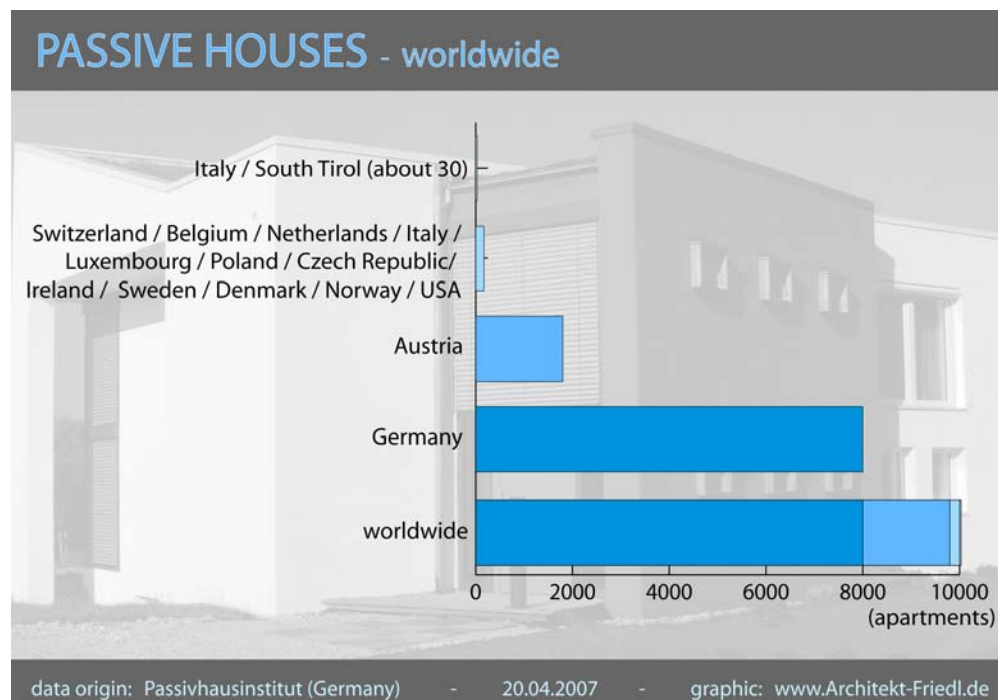


Architect Friedl, Adelzhausen (Germany)

The Passive House is the world's leading standard in energy efficient construction. Passive Houses are buildings which assure a comfortable indoor climate in summer and in winter without needing a conventional heat distribution system (under climatic conditions prevailing in central Europe). It is not an energy performance standard, but a concept to achieve the highest thermal comfort conditions with low costs.

The standard has been named "Passive House" because the "passive" use of free heat gains – delivered externally by solar irradiation through the windows and provided internally by the heat emissions of appliances and occupants – essentially suffices to keep the building at comfortable indoor temperatures throughout the heating period.

The Passive House saves over 80% on heating compared to new houses; for older houses, average energy savings up to 10-15% are possible. The energy requirement for heating is lower than 10 to 20 kWh/(m²a), adding up to a low cost of 10 to 25 € per month. This small space heat requirement can be met by heating the supply air in the ventilation system – a system which is necessary in any case.



© graphic Architect Friedl, Adelzhausen (Germany)

Meeting in the city hall of Adelzhausen

At 12 o'clock the mayor of the municipality of Adelzhausen Mr. Thomas Goldstein received our group in the city hall. He appreciated our staying here in Adelzhausen. He spoke about the history and the presence of his community. The delegations of Cyprus, Greece and Italy presented him with some gifts.



Mayor Goldstein (Germany) and Konstantinos Katrantzis (Greece)

Meal in a local farmers market in Dasing

On the way to the next project, we stopped at a local farmers market near Augsburg to have lunch. All the products are produced by the rural farmers. Our lunch took about 1 hour.



Lunch at a farmers market in Dasing

Trip to Augsburg and visit of a Plus-House during the build-phase

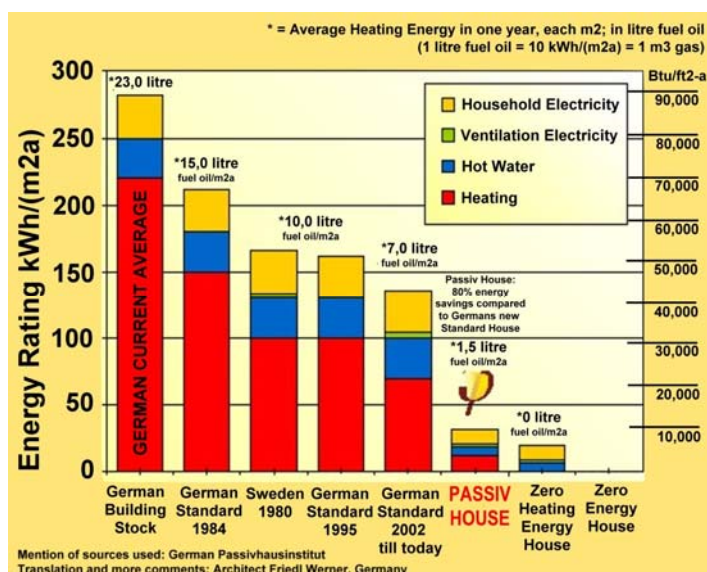
At 14.15 o'clock we arrived in Augsburg to see one of the first Plus-House in Passive House construction in Germany. We saw the building during the built-phase. The architect was also Mr. Werner Friedl from Adelzhausen.

The Plus-House collects additional renewable energies and loses almost no energy, because of the "thermos flask standard - Passive House Standard". The heating energy balance in a year is positive. This is the reason it is called a Plus House. But the basis for the building is the Passive House Standard to guarantee the excellent construction.

The owner of the building, Mr. Soukup addressed the group in his new house. Mr. Friedl and Mr. Soukup explained the function of the Plus-House. Architect Friedl said: ".....it is more and more important to keep the building also cool in summer time also, with no cooling energy in the summer period....".



The Delegations in front of the Plus-House during the build-phase



The Heating Energy is less than Zero in a Plus House
© graphic Architect Friedl, Adelzhausen (Germany)

Visit to the center of Augsburg

At 15.30 o'clock we had a meeting with Andrea Gehler the leader of the Europe-direct-office-Augsburg in the "Golden Room" in the town hall of Augsburg.



Andrea Gehler and the group in the "Golden Room" in the town hall of Augsburg.

The Romans founded Augsburg in 15 BC and this makes it the oldest town in Bavaria, the second oldest in Germany. The center of the city is the picturesque "Renaissance Town Hall" and the "Perlach Tower". Elias Holl built the town hall with the "Golden Room". At an English spoken guided tour we saw many interesting sights of Augsburg and we learned something about the Fugger Family. Fugger was the richest man in the world.

Dinner at the "Ratskeller" in Augsburg

The day ended with a dinner at the "Ratskeller" in Augsburg. Ratskeller is the famous restaurant in the lower lever of the Town hall.



Dinner at the "Ratskeller" in Augsburg

The summary of the project day:

It was one of the hottest days of the summer. Temperatures up to 37 degrees Celsius were not typical for normal German weather. We could feel the climate changes by the project work.

It was a long day and the delegations of Cyprus, Greece, Italy and Germany had collected a lot of material to discuss at the next meeting.

Responsible for the program

Werner Friedl
architect

(Thanks to Tom Lappas, Las Vegas, USA for proofreading.
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