

Trip to AUGSBURG (GEMANY) – From 24th October to 1st November, 2008. Comenius school project on "Renewable energy - a future for our planet"



Part of the Lifelong Learning Programme, Comenius seeks to develop knowledge and understanding among young people and educational staff of the diversity of European cultures, languages and values. Three schools - *ISIS "G.A. Cavazzi – Sorbelli"* (Pavullo, Italy), *I.E.S. Isaac Peral* (Torrejón, Spain) and *Jakob-Fugger-Gymnasium* (Augsburg, Germany) have committed themselves to bring 'Europe' into their school communities and enrich their school education.

Italian, Spanish and German students and teachers met personally for the first time in this Comenius project. They were working together during a one week project stay in Augsburg. The hosting school was *Jakob-Fugger-Gymnasium* situated in southern Bavaria.

Arriving on 24th October the twenty-two exchange students from Pavullo (Italy) and Torrejón (Spain) accompanied by six teachers met their German partners. The main aim of this first multinational students' meeting was to gain a detailed insight into renewable energies used in Bavaria.

Getting to know each other was naturally another principal aim of this gathering at the beginning of the project so next morning they met in Augsburg centre to carry out a guided tour to the most outstanding buildings in the city. Afterwards they enjoyed a dinner

altogether accompanied by teachers and headmasters, an opportunity to mix cultures and speak English as much as possible with other European partners. They spent the rest of the weekend in their host families.



The Italian and Spanish students spent the weekend in their host families learning about German culture and way of life.

Monday morning was the official kick-off meeting with the headmaster Mr Kretschmer, members of the parents association, friends of the school and the local press. After a typical *Weißwurstessen* the students of the three national groups presented their findings on the energy situation in their region.



The study which they had conducted in advance of the meeting consisted of a common multinational and a national part – these two parts enabled the participants to discuss similarities and differences in their countries. A visit to the local environmental agency in Augsburg (*Umweltamt Augsburg*) highlighted the current energy situation in Augsburg industrial city.

The following days the students spent a lot of the time on the road as they visited different power plants, companies and communities all united by the idea that renewable energies are environmentally friendly as well as efficient which eventually leads to earning a profit.



On Tuesday the participants went south and visited the model ecological community of Wilpoldsried. This community is a front runner of the environmentally friendly use of renewable energies offering its inhabitants e.g. a short-circuit heating based on wood pellets, the use of wood as a sustainable building material, centralized buying of equipment. The energy output has grown steadily and the community is now able to sell their energy surplus to the national energy grid. The next focus was on wind energy and the basics of the technology behind it. Mr Beermann, design engineer and head of *Beermann energysystems* exemplified the basics of the technology behind with the wind mill of Bidingen and gave a detailed insight into operation and maintenance of such a wind energy plant.

The group spent the early afternoon at the true fairy castle *Neuschwanstein* and had yet another scientifically motivated visit to a hydro-power plant (*Forggenseekraftwerk*) at the river *Lech*.



On Wednesday the main focus was on biogas. The Comenius group visited a bio gas plant in Mering which was designed by MTU Onsite Energy. The company is one of the world's leading providers of gas and fuel cell systems for combined heating and power based on biogas and sewage gas engines. An employee of *MTU Onsite Energy* gave profound information on development and operation of such a biogas plant and the operations manager of this plant gave a first-hand insight into the daily operation and maintenance of it. Farmers from the surrounding area have specialized in growing maize or *Miscanthus* reed which is cut into small pieces and then mixed with greenery.



This mixture is slowly fermenting to methane gas which then runs an ordinary gasoline engine generating electricity. Moreover, the warm exhaust fumes are then used in a heat recovery system to heat nearby buildings. The afternoon was once again spent sightseeing – this time the group had lunch at the world famous *Hofbräuhaus* and then enjoyed a guided tour of Munich. On the way back they were able to get a quick glimpse of the new football arena in Munich (*Allianz Arena*).



On Thursday morning the participants were welcomed by the managing director of the sewage treatment plant in Augsburg Mr Wagner. Being a former student of *Jakob-Fugger-Gymnasim* it was a deep concern to him to introduce the plant personally. Later on the chief engineer joined the group on its tour of the sewage plant and explained vividly how they turn human excrement in anaerobic conditions into methane which once again powers an ordinary gasoline engine generating electricity.

Rounding off this informative trip Mr Wagner invited the group for lunch and gave everyone lots of information material.



After a very busy and mentally challenging week the students and teachers enjoyed at last a free afternoon in Augsburg.

The next morning the group was back on the road again to visit the exemplary solar community of Moorenweis. During an information meeting in the town hall the participants learned from Mrs Baidl of *Ziel21 (Zentrum Innovative Energien e.V. für den Landkreis Fürstentfeldbruck)* that numerous initiatives are trying to push the percentage of renewable energies in the common energy mix of Germany. Having learned about the theoretical background the group then visited one component of their concept – the community’s solar installation, one of the biggest outdoor solar installations in Germany operated by *ecostream*.



In the afternoon there was the official reception by the local head of the school division of Augsburg *Mr Köhler* and the official farewell by the governing body of *Jakob-Fugger-Gymnasium* at the town hall.

Throughout the whole week the participants of the Comenius project had the opportunity to talk to experts in hydro-power, solar-power, wind energy as well as biogas specialists. The participants gained a fascinating insight into the use of renewable energies and the state-of-the-art science and technology.

The successful project week was concluded in medieval atmosphere – deep down the historic *Maximilian Boulevard* in Augsburg. Italian, Spanish and German students together with their teachers, the governing body of *Jakob-Fugger-Gymnasium*, their German hosts and friends of the school celebrated this truly European week which has increased the knowledge of the students and teachers alike. The Spanish group completed their very last day visiting the Science Museum in Munich before going to the airport.



Italian, Spanish and German participants have been working together in this remarkable week using their second language English as a way of communicating among different European people.

Sharing one working language made all the participants cross the barrier of their national languages: *Renewable energies – a future for our planet* – a 2008/2010 Comenius project and an obligation to looking ahead in energy matters as well as crossing language barriers.

