PROJECT OF CO-OPERATION OF MIDDLE-EUROPEAN UNIVERSITIES IN POWER ENGINEERING

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ABOUT CO-OPERATION PROJECT – INTENSIVE PROGRAMME (IP)

- The name of the co-operation project is Distributed Power Generation Systems.
- The distributed power systems are understood not only as territorially distributed but also as distributed in time according to the possibilities of energy supplies available from different sources. At present all issues connected with up-to-date power generation and distribution are included in the curricula of the five universities participating in the project.
- **The co-ordinating institution is the University of West Bohemia**, represented by the Department of Electric Power Engineering and Ecology at the Faculty of Electrical Engineering.

PARTNERSHIP COMPOSITION AND CONTRIBUTION

The participating institutions are providing expertise in the following fields covered by the project:

· Electric power engineering and ecology (Czech Republic, University of West Bohemia, Faculty of Electrical Engineering)

· Physics (Germany, Westsächsische Hochschule Zwickau, Institute of Informatics and Physics)

· Electric power engineering (Slowak Republic, Technical university Košice, Faculty of Electrical Engineering and Informatics)

· Electric power consumption from the point of view of various sources of energy and the daily load diagram and their optimum exploitation in power generation (Germany, TU Chemnitz, Department of Power Engineering)

· Distributed electric power generation from the point of view of the territorial distribution of sources. High voltage and electric equipment (Austria, TU Graz, Department of High Voltage and Electrical Equipment)

Non-university partners involved in the project:

· South Bohemia Power (Czech Republic) Electric energy transmission, distribution and supply in the south Bohemia region, design of electrical networks

· Bomin Solar (Germany) Use of photovoltaic and heat solar energy. Experience in co-operation: UWB partners in project EU INTERREG III

· BIC Zentrum Zwickau (Germany) Utilization of alternative sources of energy (from the German perspective). Experience in co-operation: UWB partners in IP "Use of measurements methods in solving enviromental problems"

· Teaching staff from all the five institutions will participate in the programme and conduct lectures and seminars. **Co-ordinator** for organization of the IP, teaching, preparation and dissemination of teaching is **Doc. Ing. Jan Mühlbacher, CSc** and him helps 7 teachers from the same department UWB.

The other partner institution:

· Westsächsische Hochschule Zwickau (University of Applied Sciences) Germany

· Technical university Košice, Slowak Republic

· Universität Chemnitz (Technical University) Germany

· Universität Graz (Technical University Graz) Austria

And many more non university industry partners, institution and organisation from Czech Republic…

ACTIVITY, PEDAGOGICAL AND DIDACTICAL APPROACHES AND OUTPUTS OF THE PROJECT

- Since 1999 till present - realized always one meeting-conference per year. All the co-operated institutions and organizations were attending this meeting. The time duration for one IP is three years.
- The IP will take place **partly at the University of West Bohemia and partly at the training centre at Pernink.**
- Duration of the IP - one week, used languages - English and German.
- There was discussed problems about future situation in energy supply in Central Europe.

- Finally, after the completion of the 3-year IP, the teaching materials are ready for use in both full-time courses. Next the course will be integrated in the study programmes of all the partner universities and will become a regular part of their innovated curricula.
- The target participants in this proposed IP in the near future will be students studying for a Master´s degree, Bachelor degree and to Ph.D. students.
- The produced teaching materials, includs both classical teaching materials (coursebooks, handouts) and multimedia teaching materials (CD Roms, websites, etc.).
- The volume and structure of the teaching materials will correspond roughly to three one - semester courses with 2 hours of lectures and 2 hours of seminars and laboratory courses per week.

CONCLUSION AND THE NEAR FUTURE

- Students who have successfully completed the IP will receive **credits.** The number of credits is relatively high (6-8 ECTS). On completion of the IP students will also receive **certificates.**
- After three years the IP will become a regular part of the study programmes of the partner institutions and will be **integrated in their curricula.**
- An important part of the institutions is the full recognition of study periods, an improvement in the **language skills** of both students and staff…

- Some **photos from collective deals and conferencies** are summarized in the **next figures:**

FIGURE 1 Excursion on Environmental Centre Boží Dar - Czech Republic

FIGURE 2 Excursion on nuclear power reactor Vrabec - Prag - Czech Republic

FIGURE 3 Excursion on Sollar centrum Boží Dar - Czech Republic

FIGURE 4 Excursion on heat power station - Vřesová - Czech Republic

FIGURE 5 Excursion on watter power station Markersbach - Germany

FIGURE 6 Excursion on nuclear power reactor Vrabec - Prag - Czech Republic

END OF PRESENTATION

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