



The sixth EC Framework Programme, The European Research Area Unique Challenges for the European Power Electronics Community

We are now at the dawn of the 6th EC Framework Programme (FP6). November 2002 will see a huge informative session taking place in Brussels and the end of the year the publication of the first calls. The time to prepare project proposals is not coming, it is there and accelerated actions have to be set up.

The Sixth Framework Programme is aiming at integrating, structuring and strengthening the European research. Therefore selected priorities have been defined and will be implemented through a stronger link with national, regional and other European initiatives. Furthermore, coordination and procedure simplification will underline the new programme structure.

Seven thematic priorities have been budgetted: Genomics and biotechnologies for health, Information society technologies, Nanotechnologies and nanosciences, Aeronautics and space, Food quality and safety, Sustainable development – global change and ecosystems, Citizens and governance in a knowledge-based society.

Space is further foreseen for specific activities covering a wider field of research in which support for SMEs and for EU new and emerging needs is to be found.

The concept of “European Research Area” has been introduced with substantial funding for research and innovation, human resources, research infrastructures, science and society and with special support for the coordination of activities and the support for the coherent development policies.

Besides the instruments classically used in the former framework programmes, three new instruments have been introduced among which the “Network of Excellence”(NoE) and the “Integrated Project”(IP). They should attract strongly the attention of the Power Electronics and Drives community as a part of the unique challenges to be met in these first years of the third millennium by all the friends active in those fields combining Power Electronics, Electrical Energy, Electronics, Computers, Control, Mechanics, Thermodynamics, Alternative Energy.

A first step has been performed by inviting the EPE community in submitting an expression of interest(EoI) for a NoE in the field of "Advanced Energy Conversion and Conditioning Technologies"(AECCT).

ECCT is a key tool for achieving the objectives of FP6, for improving the quality of life and indoor/outdoor environment, for sustainable energy production, for reduction of greenhouse gas emissions, for sustainable agro-food systems and for water and soil reconditioning. Advances in ECCT, exploiting new power electronics systems, energy conversion devices and system control regimes, are both fundamental and crucial for the development of the clean, efficient and sustainable technology of the future. In 1997 already, it was estimated that over 50 % of the European and US electricity consumption passed through electronic conversion and conditioning equipment and today, 100 % of the production of electricity based on alternative energy sources must undergo a conditioning through ECCT equipment before use. For short, ECCT represents a horizontal path through several thematic priorities of FP6.

Despite the excellence of many laboratories, the present lack of co-operation and of critical mass is one of the major hurdles to the introduction of ECCT in our cities, industries and infrastructures. A mobilisation of activities and resources is then necessary in order to improve the dimension and the equipment of laboratories, the exchange of scientific and technical information, the mobility of young researchers, the development of joint research programmes and the collaboration between academic and industrial R/D centres, the attractiveness for women, the increase of graduate students in this area. A NoE has been proposed by the 7th of June to the EPE community and to the EU Commission as the most suitable tool to reach these goals. Not only hardware facilities would be available for Europe wide research demand, but also skills, otherwise spread all over Europe, could be joined to gain the necessary consistency, competitiveness and visibility in the energy conversion and conditioning technology field.

About 40 R/D units from universities and companies representing 14 countries and over 600 full time researchers are ready to gather their internationally proven expertise in the following FP6 fields of interest:

Sustainable energy systems, Energy savings – efficiency and quality –, Sustainable surface transport, Aeronautics and space, Software technologies – embedded systems and distributed systems –, Food quality and safety, Nanotechnologies and nano sciences.

Last but not least this NoE, called AECCTECH_NET, will be structured in the second half of 2002 and will certainly be an excellent base to launch “Integrated Projects” during the four years of FP6, and after, carried out by the AECCTECH_NET partners.

AECCTECH_NET based on the EPE association structure is not a closed club and potential candidates are invited to join EPE and this NoE to help defining and strengthening the network and research fields to be submitted to the EU Commission and to meet the FP6 challenges.

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