



EUROPEAN SMALL HYDROPOWER ASSOCIATION

Brussels, October 2005

Prioritising Small Hydro Research

With the objective to input the FP7, ESHA has published the Small Hydropower sector's Strategic Research Agenda – *European Strategy for RTD in Small Hydropower*- in the view of identify priorities for Small Hydro research.

This Strategic Research Agenda details the priorities for Small Hydropower short-term research. In other words, it seeks to explode the myth that there is no longer a need for funding for SHP research.

Indeed, In Europe, whereas the potential for large hydro development is practically exhausted, small hydro has still a huge and untapped potential – abandoned or outdated sites with low head, drinking water networks, wastewater ones, irrigation ones, ... - which will allow EU small-hydro industry to increase its activities.

Whereas the commercial actors in large hydro develop solutions that are case specific and involve much RTD for each case, small hydropower ought to be systemised as far as possible, so as to achieve an optimal machine on a technical, environmental and economic point of view.

On top of that, RTD cannot be undertaken without supports by the independent SME in small hydro due to the lack of financial and human resources, contrary to the commercial actors in large hydro.

Contrary to the generally accepted idea that small hydropower is an old energy that has reached such an experience that it cannot be improved; small hydro has still a scope to evolve, especially in equipment and design practises. Therefore small hydro will gain to carry on being improved through RTD so as to be even more economically viable and more integrated to the environment. Moreover although Research projects involving small hydropower have been included in successive EU Research Technological Development framework programmes (FP), the number of small hydro power

projects funded by these programmes have decreased to the point at which no RTD programme has been developed for SHP under the FP6.

Developed by the Thematic Network on Small Hydropower (TNSHP) through the FP5 funded Project, this RTD Strategy for SHP represents the combined thinking and close collaboration of manufacturing industry, financiers, research institutions, national energy authorities and EU institutions.

The Strategic Research Agenda goes further, detailing the key priorities in terms of electromechanical equipment, control and monitoring, Environmental technical integration, civil works, and administrative and marketing issues. The priorities have been divided for each subject in technical and non-technical ones and have been weighted (1) essential to reach White Paper objectives by year 2010, (2) useful to reach White paper objectives by year 2010, (3) interesting in the scope of White Paper objectives by year 2010.

Small Hydropower is needed to reach the white paper targets on Renewable Energy and to contribute to Climate Change mitigation, security of supply and economic development. Therefore small hydro will gain to carry on being improved through RTD so as to be even more economically viable

Annually, the proposed overall budget of FP7 represents an increase of nearly 200% on FP6. The portion of this dedicated to energy however, at €2,931 million, is only some 4% of the total budget, representing a slump in the already increasingly diminishing proportion of framework programme funding assigned to energy (at 66% in 1983). In real terms, the FP7 budget for energy represents an increase of only 3.3% over FP6.

Finally, there is an urgent need for amendment of the Framework Programme structure to include a specific budget for renewable energy Research, Technological Development and Demonstration (RTD), including a chapter for small Hydropower, to replace the existing "Sustainable Energy" budget line, which includes technologies not defined as renewables in the EU Directives, e.g. carbon sequestration and hydrogen.