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RES2H2: Cluster Pilot Project for the integration of RES into European Energy Sectors using Hydrogen

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Dauer des Projekts (von – bis)	2002 – 2005

SUMMARY

To develop a variable automatic control system that allows optimum selection of running parameters. A controller/power conditioning unit (CPCU) able to manage the output of the wind farm in order to provide a regulated supply of AC current to the consumer load at all times will be developed. (The CPCU has to be able to forward AC from the wind farm to the desalination plant and the consumer load. Excess AC from the wind farm will be converted into DC with voltage matching that of the electrolyser. The fuel cell power output (DC) will be converted into usable AC and delivered to the consumer load. The CPCU will also handle the control and monitoring of the desalination plant, the fuel cell and electrolyser operational envelopes).

The first Task:

Task 9.1 Development of power conditioning system.

Task 9.3 Development of instrumentation and control system

Results:

- Defining the interfaces to all subsystems
- Design of the power conditioning system included wiring diagram
- Preliminary design of the control system

IDS has designed the power conditioning system called RES (Reversible Energy Storage System). IDS also started with the control design of the system. During the last year 2002 IDS finished the first task successfully (development of a power conditioning system). The main work has been to define the interfaces to all the subsystems, IDS has to connect together. Therefore IDS had to visit some partners in the project and be present at the meetings which took place in Sevilla and Gran Canaria.

The state of work is in time with the schedule of the project.