

IPHE – Meeting
Essen, February 20th

Special Market Applications

**German National Innovation Program
on
Hydrogen and Fuel Cells**

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Chairman Strategy Council

- **Emergency Power, Back Up Power, UPS**
 - Telecommunication (e.g. base stations), computer centers, hospitals...
 - Long run time, high reliability, reduced power consumption (no cooling for batteries)
- **Materials Handling**
 - Forklift trucks, special vehicle e.g. airport luggage trucks
 - Emission free operation, short refueling time
- **Boats and Light Electric Vehicles**
 - Emission free operation in leisure markets
- **On Board Power Supply (APU) in Leisure Applications**
 - Boats, Recreational Vehicles, Remote Power
 - Emission free and grid independent
- **Micro Fuel Cells**
 - 4 C Applications
 - Extended run time, battery charger

- **Early Market Opportunities in some Applications**
 - First generation commercial products available
- **Industrial Interest**
 - Establish Supply Industry
 - Reduce Market Entry Barriers for Fuel Cells & Hydrogen
 - Public Awareness
- **SME`s are Key Player**
 - Use R&D Synergies to other Applications
 - Time to Market is essentiell
 - More than 40 German companies active
- **Demonstration Project are Dominating**
 - Lighthouse projects lead to commercial maturity and infrastructure
 - Supporting Measure (e.g. education& training, CR&S...)

Summary

Leisure – Electronics – Emergency Power – Material Handling

Early Market Opportunities for Fuel Cells

- Grow production volumes for supply industry
- Market differentiation for OEMs
- Public awareness and acceptance



MASTER CLASS

Fuel Cell & Hydrogen Education

- Organized by Fuel Cell Education and Training Center in Ulm, Germany (WBZU)
- In the framework of IPHE and EU HYFED6 Group
- With the Support from the Federal Ministry of Transport, Building, and Urban Affairs



MASTER CLASS

Fuel Cell & Hydrogen Education

Mater Class Objectives

- training for people affiliated with government administration and funding agencies in the field of renewable energies, especially fuel cells and hydrogen
- interchange of national H2&FC activities
- initiation of bilateral and multilateral cooperation's

Scheduled Date: May 5 – 9, 2008

Participants

- From each IPHE Country, EU country and EU candidate's **one participant** is invited
- A simultaneous membership in the IPHE and EU counts only once
- Total of 43 participants

Costs

- German Government (BMVBS) is waiving the course fee, accommodation, transport within Germany and a daily allowance for one participant form each IPHE and EU country
- A simultaneous membership in the IPHE and EU counts only once.
- Air fare to and from Germany will not be covered by the waiver

Thank you for your Attention