# Hydrogen Energy

**Building Bridges to** a Hydrogen Energy **Economy** 

## 18 WHEC 201

Hydrogen Energy and Technologies

18th World Hydrogen Energy Conference

May 16 - 21, 2010, Essen Germany

Under the auspices of: International Association for Hydrogen Energy (IAHE)



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### The Hydrogen **Energy Economy:**

### Why, When, and How Much Hydrogen?

#### Strategic Challenges

Energy sustainability as a basis for better quality of life can be accomplished by:

- providing CO<sub>2</sub>-lean energy carriers at affordable prices
- ensuring the security of energy supply
- establishing hydrogen as an energy hub, complementing electric power
- bridging the gap between research / demonstration / early markets and mass market introduction of hydrogen energy and fuel cells
- intensifying the use of hydrogen in future energy supply systems
- gathering operating experience in order to improve the systems involved
- gaining acceptance for new energy systems
- performing systems analyses and assessments guiding the transition
- securing hydrogen energy safety through legally binding international codes and standards

#### **■ Market Introduction Tasks**

Apart from technology progress achieved by R&D, the market introduction tasks are influenced by a number of parameters:

- identifying customer requirements
- identifying investment requirements
- creating incentives for motivating suppliers, users, industrial companies and politics
- shaping the transition towards a hydrogen energy economy in terms of technology requirements, benefits, drivers, investors and costs
- gaining the commitment in the transition process of all major private and public stakeholders
- clearing intellectual property rights and human resources
- introducing regulatory matters and legal issues
- building market introduction clusters via coordination and networking
- performing technological benchmarking compared with conventional technologies

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