

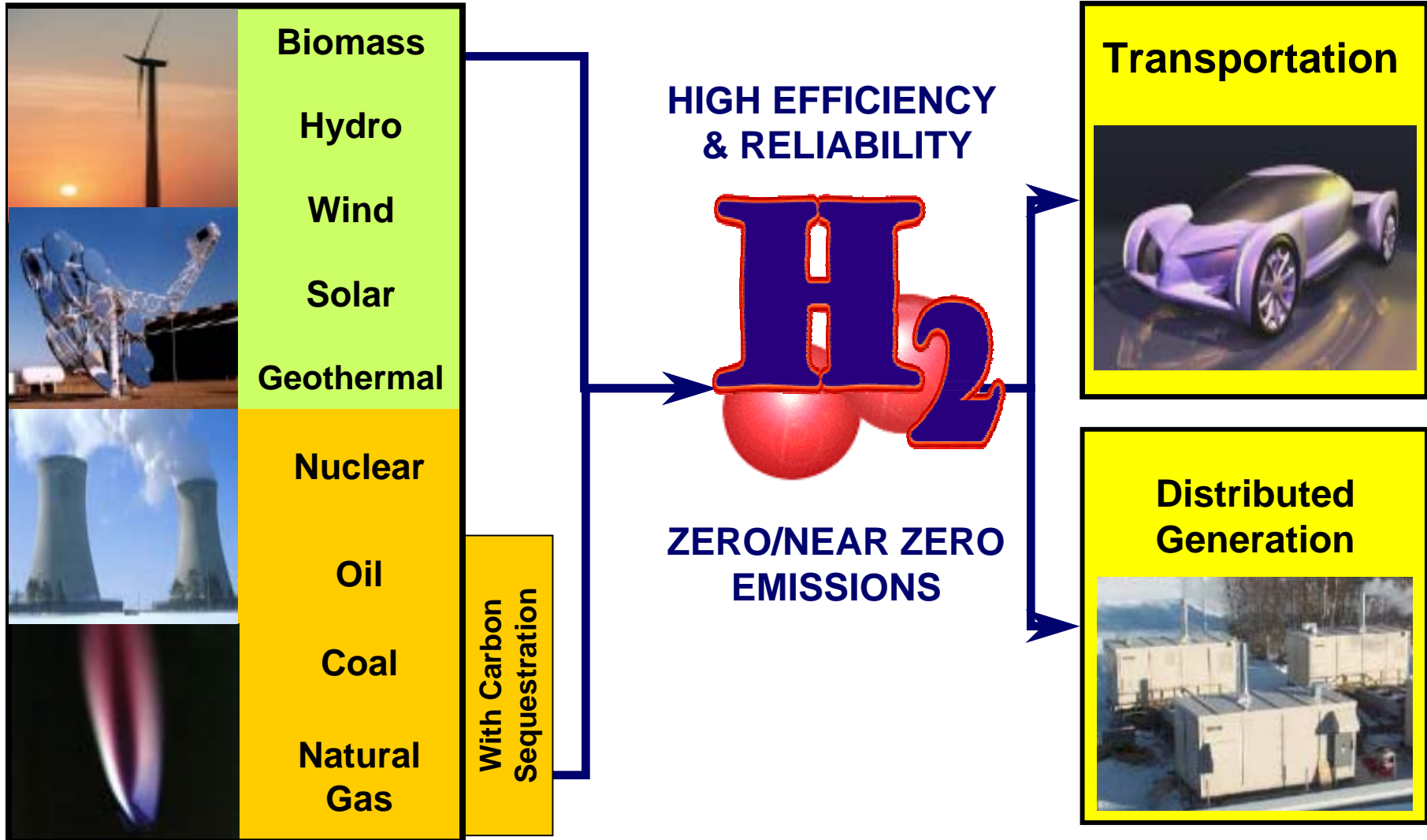


**International Partnership
for the Hydrogen Economy**

Michael Mills

IPHE Secretariat Office

Why Hydrogen? It's abundant, clean, efficient, and can be derived from diverse domestic resources.



IPHE Goal



Efficiently organize and coordinate multinational research, development and deployment programs that advance the transition to a global hydrogen economy.

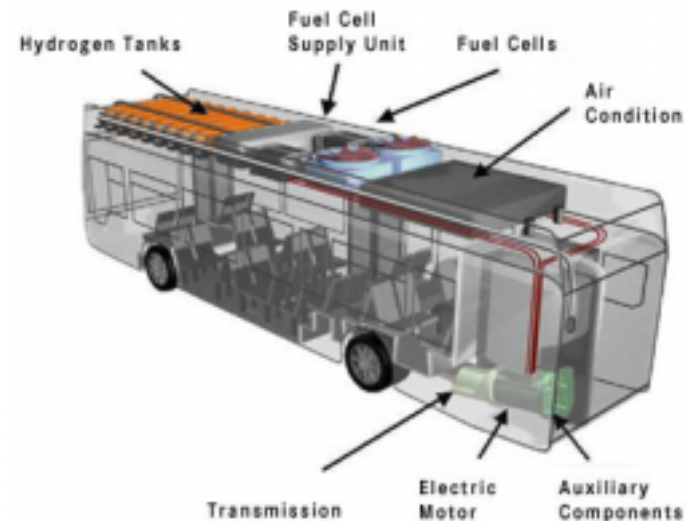
European Union Initiative



The European Union has dedicated over €2 billion to hydrogen and fuel cell research activities, and is establishing a European Technology Platform to coordinate member state initiatives.

Through the **Clean Urban Transport for Europe Program (CUTE)**, the European Commission is allocating €18.5 million to support 9 European cities in introducing hydrogen into their public transport system.

27 fuel-cell powered buses, running on locally produced hydrogen, will show that zero emission public transport is possible when ambitious political will and innovative technology are combined.



Citaro fuel cell bus prototype which will be the basis for the bus fleet used in the fuel cell bus project.



California Fuel Cell Partnership



IPHE Ministerial



The IPHE Ministerial was held November 19-21, 2003 in Washington DC, USA.

- Signing of the Terms of Reference
- 700+ delegates and participants representing approximately 30 countries
- Public-Private Dialogue Sessions
- IPHE Committee meetings
 - ❖ Steering Committee
 - ❖ Implementation-Liaison Committee

IPHE Partners



Russian Federation



USA



Canada



Iceland



IPHE Partners' Economy:

- Over \$35 Trillion in GDP, 85% of world GDP
- Nearly 3.5 billion people
- Over 75% of electricity used worldwide;
- > 2/3 of CO₂ emissions and energy consumption



Japan



Republic of Korea



China



India

United Kingdom



France



Germany



Italy



Australia



Brazil



Norway



European Commission



New Zealand



Steering Committee



- Recent Meetings:
 - Paris, France (26 – 28 January 2005)
 - Beijing, China (26 – 28 May 2004)

- Initiated the Beijing Action Plan:
 - ❖ Identify appropriate role for IPHE in Codes and Standards work
 - ❖ Identify pathway forward for stakeholder participation
 - ❖ Develop IPHE communication and outreach package
 - ❖ Compile an integrated IPHE hydrogen roadmap

➤ **Paris Meeting Action Items:**

- ❖ Determined options for stakeholder involvement
- ❖ Finalized IPHE project and event criteria
- ❖ Invited New Zealand to join the ILC.

➤ **Next meetings:**

- ❖ Kyoto, Japan (14 – 15 September 2005);
- ❖ Vancouver, Canada (March 2006).



Implementation-Liaison Committee

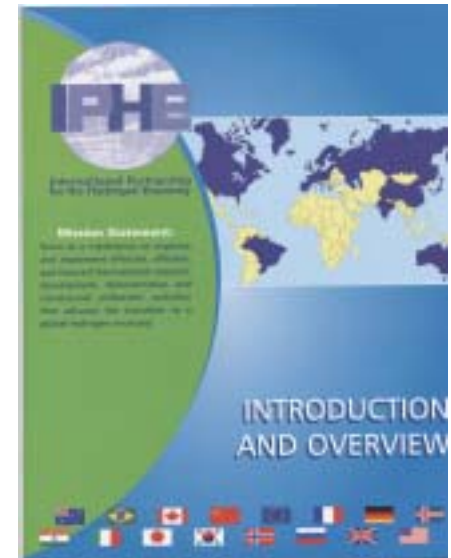
- 2nd meeting in Germany, March 2004
- High Priority Activities
 - ❖ Hydrogen Production
 - ❖ Hydrogen Storage
 - ❖ Fuel Cells
 - ❖ Codes and Standards
 - ❖ Socio-economics
 - ❖ Developing national hydrogen R&D Roadmaps
- Next Meetings
 - ❖ Rio de Janeiro, Brazil (22 – 23 March 2005)
 - ❖ Shanghai, China (17 – 19 October 2005)
 - ❖ Lyon, France (18 – 19 June 2006)

- **3rd Meeting in Iceland, September 2004**
- **Highlights from the 14 Point Reykjavik Action Plan:**
 - Publication of Scoping Papers on High Priority Activities
 - Conduct International Conferences on High Priority Topics, including Hydrogen Production and Storage, and Fuel Cells
 - World Atlas on Hydrogen and Fuel Cell Demonstration Projects
 - Development of IPHE Roadmap
 - Established two Tasks Forces:
 - Safety, Codes and Standards
 - Education
 - Labeling IPHE Projects
- Organizing international workshops
 - ❖ Storage: Lucca, Italy (20 – 22 June 2005)
 - ❖ Renewable Production: Seville, Spain (24 – 26 October 2005)

Recent IPHE Products



- **Updated Website**
- **World Demonstration Atlas**
- **IPHE Brochure and Poster**
- **Hydrogen Fact Sheets**
- **Hydrogen Vision and Roadmap (with members)**
- **APEC Interim Hydrogen Framework**
- **IPHE Scoping Papers (5)**
- **IPHE Project and Events Guidelines**
- **Concept Paper on Stakeholder Involvement**
- **International Workshops**



Contacts



E-Mail: IPHE@EE.DOE.GOV

Michael Mills
U.S. Department of Energy
202/586-6653
michael.mills@ee.doe.gov

Christopher Bordeaux
U.S. Department of Energy
202/586-3070
christopher.bordeaux@ee.doe.gov

Internet: <http://www.iphe.net>