IEA HIA NEWS

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THE IEA HIA TODAY

The IEA HIA began its new five year term of operation on 1 July, 2009 after successfully completing the previous 2004-2009 term. According to our tradition, the IEA HIA's new *Strategic Plan 2009-2014* is the product of a democratic, "bottom-up" team effort involving all members. The Strategic Plan features three themes, which are at once goals and priorities: 1) collaborative R,D&D that advances hydrogen science and technology; 2) analysis that positions hydrogen; and 3) hydrogen awareness, understanding and acceptance. These themes coalesce to support the IEA HIA mission of accelerating adoption and widespread utilization of hydrogen that optimizes environmental protection and promotes economic development globally. For the complete *Strategic Plan 2009-2014* and *End of Term Report 2004-2009*, as well as the *IEA HIA 2008 Annual Report,* visit the IEA HIA website at www.ieahia.org. For selected highlights of the retrospective IEA HIA *End of Term Report 2004-2009*, see the reverse side of this flyer.

IEA HIA Embraces the Developing World through New Member UNIDO!

This November, the IEA HIA officially welcomed the United Nations Industrial Development Organization (UNIDO) to our membership ranks, which include 21 countries and the European Commission. UNIDO is the IEA HIA's first international-organization member. Furthermore, UNIDO's IEA HIA membership marks the first time a UN organization has joined any IEA implementing agreement.

Energy and environment are key thematic focus areas for UNIDO, the 172 member UN organization headquartered in Vienna, Austria. The International Center for Hydrogen Energy Technologies (UNIDO-ICHET) will represent UNIDO on the IEA HIA Executive Committee. With UNIDO's accession, the IEA HIA is better positioned to inform and engage the developing world in pursuit of a hydrogen future.

IEA HIA Portfolio

Currently, there are nine tasks in the IEA HIA portfolio. Task 22 - Fundamental and Applied Hydrogen Storage Materials Development was recently extended three years to 2012. Likewise, Task 23 - Small-Scale Reformers for On-Site Hydrogen Supply (SSR for Hydrogen) received a two year extension to 2011. Task 21 - BioHydrogen is also expected to continue another three years with an expanded scope of work. Three new tasks are in now in definition: Analysis, Infrastructure, and Distributed and Community Hydrogen.

Outreach

The IEA HIA is very pleased to announce that it co-organized the 3rd International Conference on Hydrogen Safety (ICHS3) with the International Association for Hydrogen Safety (IA HySafe) in September, 2009 in Corsica, France. In October, the IEA HIA participated in the IEA Networks of Expertise in Energy Technology (NEET) Workshop in New Delhi, India. To make the case for hydrogen, the IEA HIA was invited to present at a briefing in the U.S. Senate on "Longstanding IEA Collaborations in Hydrogen and Fuel Cell Science and Technology: Global Investments in our Energy, Economic and Environmental Future."

The Danish Gas Technology Center generously supported the IEA HIA's participation in the Bright Green trade fair immediately following U.N. Climate Change Conference in Copenhagen (COP15) in Copenhagen.

IEAHIA NEWS

HIGHLIGHTS & SUCCESS STORIES 2004-2009

The tables below capture highlights and selected success stories from the ***IEA HIA End of Term (EOT) Report 2004-2009***.

CRITERION	HIGHLIGHTS 2004-2009	NUMBER
Membership	Number of members at end of term	22 + three pending
Tasks	Number of R&D Tasks active during period	13 total + 1 in Definition
Level of Effort	Number of person years	~712
Expert Meetings	Task meetings	88
Publications/Articles	HIA summary publications	22
	Expert publications/articles	1,153
Presentations	HIA ExCo/Secretariat – Internal to IEA	12
	HIA ExCo/Secretariat – External to IEA	37
	Expert - All	1,015

TASK		SUCCESS STORIES 2004-2009 TERM
15	**Photobiological Production**	◆ **R&D Progress toward development of H_2 production by microalgae**
16	**Hydrogen from Carbon Containing Material**	◆ **State of the Art reports for all three subtasks: Subtask A**- Large Scale Integrated H_2 Production Decarbonisation; **Subtask B** – Prospects for H_2 from Biomass; **Subtask C** – Small-scale Reformers for Stationary H_2 Production with Minimum CO_2 emissions. Benchmark industry participation.
17	**Solid & Liquid Storage**	◆ **Huge contribution to literature** -900+ publications and presentations plus 17 patents
18	**Integrated Systems Evaluation**	◆ **World's best address for global information and analysis on H_2 & integrated systems** ◆ General conclusions in critical areas plus lessons learned and trend analysis
19	**Safety**	◆ Laying **foundation for codes and standards regulatory framework** and public **comfort with H_2**
20	**Hydrogen from Waterphotolysis**	◆ Development, acceptance and operation of **two multi-year R&D PEC programs** ◆ WO3 PEC work led to novel, reliable & **low-cost pollution control sensors for auto industry**
21	**BioHydrogen**	◆ **Better genomic understanding** of H_2 strict **anaerobes**
22	**Fundamental & Applied Hydrogen Storage Materials**	◆ **World's largest collaboration on hydrogen storage materials R&D** ◆ As of December 2008 produced 450+ publications/articles, 450+ presentations and 16 patents.
23	**Small-Scale Reformers for On-site H_2**	◆ Contributing to development of norms for small-scale reformers to **harmonize and fast track industrialization and carbon capture for H_2 infrastructure** and future distributed generation
24	**Wind Energy and H_2 Integration**	◆ Preparing for large-scale use of renewable wind energy for H_2 production by addressing the **entire wind production chain** from technical, economic, social, environmental, market and legal perspectives
25	**High Temp H_2 Production**	◆ Producing **summary sheets** on **high temperature processes** in both general and detailed versions

Message from the Chairman, Antonio G. García-Conde and Co-Vice Chair, Jan K. Jensen

García-Conde

As the U.N. Climate Change Conference in Copenhagen (COP15) draws to a close, the continuing challenge of greenhouse gas emission reduction lies ahead. This challenge brings bright prospects for advanced energy technologies, spotlighting the global need for appropriate policy and investment commitments. The IEA HIA believes that use of hydrogen can contribute significantly to meeting the greenhouse gas emission targets. Guided by our *Strategic Plan 2009-2014*, the IEA HIA is committed to pursuing a sustainable energy future through the advancement of hydrogen.

Jensen