



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

IPHE Industry Forum: Increasing the Role of Hydrogen and Fuel Cells in the Economy Wednesday December 5, 2018 Pretoria, South Africa

AGENDA

When: Wednesday 5 December 2018 (09:30 -16:00)

Where: The Capital Menlyn Maine Hotel & Apartments
194 Bancor Ave, Menlyn, Pretoria
Octagon Room

Focus: Countries are implementing policies and taking action to deploy fuel cells and hydrogen (FCH) that meet their national circumstances. Policy goals driving action includes security and efficiency of the energy system, addressing climate change and local air quality objectives, and, jobs and economic growth.

An approach to deploy FCH technologies is to do so in a cluster thereby providing a critical mass of consumption in various applications to make larger scale hydrogen production economically viable. Examples could be at a major port facility or industrial operation with significant ancillary services able to use FCH technologies, or alternatively in a community that can generate sufficient demand through strategic deployment of fuel cell technologies.

Another approach is to focus on niche applications that address specific needs, making use of FCH technologies competitive or near competitive with incumbent technologies. This includes materials handling units, underground mining equipment, back-up power systems for cell phone towers and remote communities.

Expected Outcomes:

- Understand the approaches by governments and firms in creating a FCH production and consumption cluster, and learn of leading niche applications of FCH technologies that are commercially viable in the market today; and,
- Identify challenges, opportunities, and actions necessary to facilitate clusters to accelerating FCH deployments including: i) Policies, regulations, codes & standards; ii) Sharing information especially on safety and infrastructure issues; iii) Assessing the role of hydrogen in enabling a clean energy systems; and, iv) Communicating the engaging stakeholders about the challenges and opportunities of fuel cells and hydrogen.

Participants (80)

- Director Generals of relevant Government Departments
- IPHE Country Representatives
- CEOs of Gas Companies, Utilities and Development Finance Institutions
- CEOs of Science Councils and Universities



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09:00 Registration: Refreshments Available

Session 1: Keynote and Setting the Scene

09:30 Welcome Address: Dr Sunita SATYAPAL, Chair of the IPHE: *Enabling Hydrogen and Fuel Cells Progress Through Global Collaboration*

09:40 Keynote Address: Dr Phil MJWARA, Director General, Department of Science and Technology

Session 2: Hydrogen in the Economy: Industry Perspectives

Moderator: Dr Sunita SATYAPAL, Chair of the IPHE

10:00 ENGIE: Koen LANGIE, Senior Project Manager: *ENGIE Vision on H2 Economy – Focus on Mining Sector*

10:20 Anglo American: Jan KLAWITTER, Head of International Policy: *Developing markets for our metals – A focus on hydrogen and fuel cells*

10:40 Impala Platinum: Fahmida SMITH, Fuel Cell Coordinator: *Implats Fuel Cell Roadmap*

11:00 Question & Answers / Discussion

11:20 Coffee Break

Session 3: Funding Instruments

11:40 Department of Trade and Industry: Kishan PILLAY: *South Africa Fuel Cells Industry Development Roadmap – Towards Full-Scale Industrialisation and Inclusive Growth*

11:55 Industrial Development Corporation: David SEKGORORWANA: *Commercialisation of Emerging Clean Energy Technologies: A Development Finance Institution Perspective*

12:10 Questions & Answers

12:30 Lunch



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Session 4: International Perspectives

There is mounting evidence towards the successful deployment of fuel cells through clusters or using the concept of a Hydrogen Valley (HV). This session will present examples where the cluster or HV concept is being considered or applied. Speakers will present the cluster or HV concept from their countries' perspective. A question and answer, and then group discussion will follow the presentations.

13:30 Presentations

Moderator: Tim KARLSSON, Executive Director IPHE

- **European Commission:** José COTTA, Head of Unit, Advanced Energy Production, DG Research and Innovation: *Getting Hydrogen to Scale – the EU Approach*
- **Germany:** Geert TJARKS, Programme Manager Power-Based Fuels, Nationale Organisation Wasserstoff-und Brennstoffzellentechnologie – NOW GmbH: *German Perspective on Hydrogen and Fuel Cell Technologies*
- **Netherlands:** Noé van HULST, Hydrogen Envoy, Ministry of Economic Affairs & Climate Policy: *The H2M Project*
- **France:** Bernard FROIS, Science Advisor, Atomic Energy and Alternative Energies Commission: *Deploying Hydrogen in France*
- **Japan:** Eiji OHIRA, Director, Advanced Energy Systems and Structure Division, New Energy and Industrial Technology Development Organization: *Hydrogen Clusters in Japan – Local Governments' Initiatives to Promote Hydrogen*
- **United States:** Sunita SATYAPAL, Director Fuel Cell Technologies Office, Department of Energy: *United States Department of Energy Hydrogen and Fuel Cell Technologies Perspective*

14:30 Questions and Answers

14:45 Coffee Break

15:00 Moderated Discussion

Moderator: Tim KARLSSON, Executive Director IPHE

Panellists and Audience will address the following points:

1. *The cluster concept applied to South Africa?*
2. *Potential partners?*
3. *Policy frameworks to support development of a cluster?*
4. *Infrastructure requirements for the success of the cluster?*
5. *What are the funding mechanisms for such a cluster?*

To help in formulating actions, Panellists and Audience should consider the following themes:

- Coordination on Regulations, Codes, and Standards
- Information Sharing and Joint R&D with focus on Safety and Infrastructure Supply Chains
- Analysis and Evaluation of H2 Across Sectors on Meeting Economic & Environmental Objectives
- Communication, Education, and Outreach

15:45 Closing Remarks: Dr Phil MJWARA, Director General, Department of Science and Technology

16:00 Close of the IPHE Forum