



Hydrogen Production Systems with Non-Fossil Energy Sources: From Components and Process Design to Large Scale Systems

Focus / Session topics

State-of-the-art hydrogen production systems with non-fossil energy sources

- Integration of electrolysers with renewable energies
- High Temperature Electrolysis Materials and Components
- Process design
- Scaling-up and BOP

Date:

8 - 9 May 2013

Location:

Ajaccio, Corsica / France

Host:

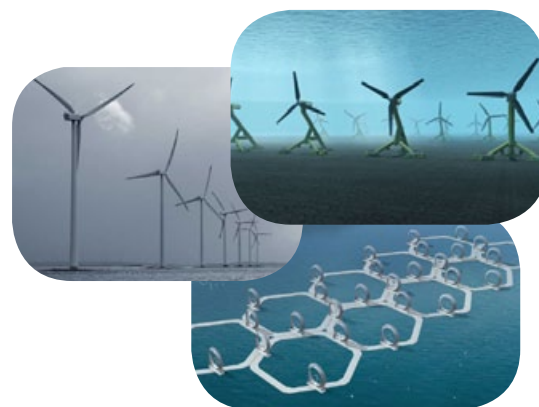
CEA-Grenoble / LITEN
in association with
the University of Corsica

Participants

The second ADEL workshop serves as a catalyst for communication and data exchange between international experts in energy vector production plants, integrating non-fossil energy sources. As such, the workshop will be beneficial to the scientific community and to industry representatives.

Speakers

The workshop features distinguished guest speakers from both the scientific community and the industry, presenting their research and sharing their insights into state-of-the-art innovative technologies.



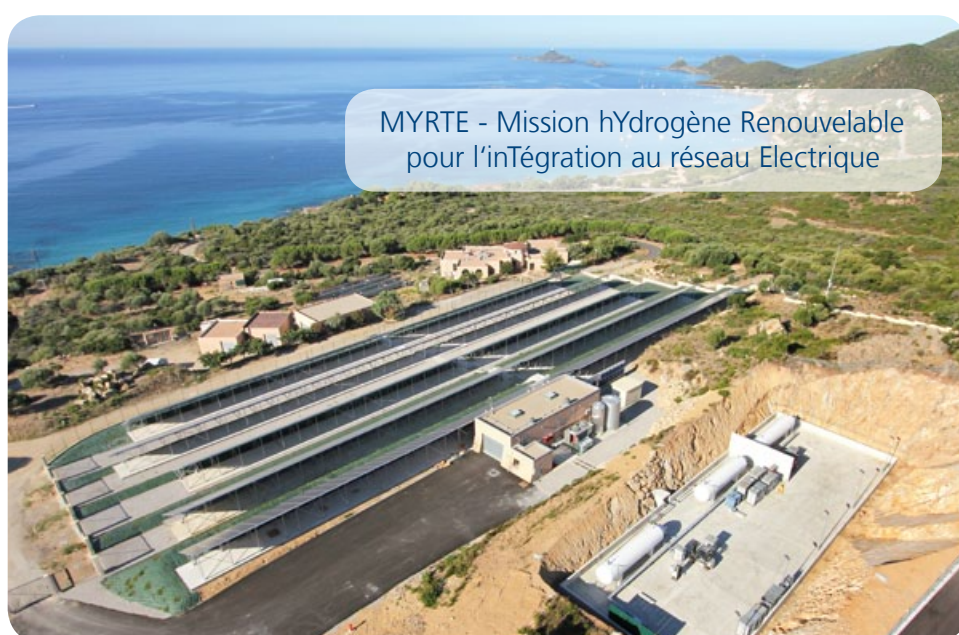
MYRTE Platform visit

The workshop is followed by a site visit to the world's largest hydrogen-based energy management system coupled to a photovoltaic field, the [MYRTE Platform](#) on Friday, 10 May 2013.

More information

Find out more about the EU-funded R&D project ADEL (ADvanced ELectrolyser for Hydrogen Production with Renewable Energy Sources) on www.adel-energy.eu

The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for the Fuel Cells and Hydrogen Joint Technology Initiative under grant agreement n° 256755.



MYRTE - Mission Hydrogène Renouvelable pour l'inTégration au réseau Electrique



2nd ADEL International Workshop

Programme

Wednesday, 8 May 2013

Individual arrival

11.00 – 12.30: Workshop reception & registration

12.30 – 14.00: Lunch

14.00 – 14.15: **Welcome to Ajaccio and Introduction to the ADEL workshop**

14.15 – 15.45: **Session 1: Hydrogen production systems with non-fossil energy sources**

Session Chair: Philippe Poggi, Université de Corse, FR

- Keynote presentation: Overview of the ADEL project. Olivier Bucheli, HTceramix SA, CH (25 min)
- Keynote presentation: Analysis of hydrogen from electrolysis and competing technologies for utility-scale energy storage. Kevin Harrison, NREL, USA (30 min)
- Keynote presentation: Thermo-economic analysis of hydrogen as a renewable energy carrier. François Maréchal, École Polytechnique Fédérale de Lausanne, CH (30 min)

15.45 – 16.15: Coffee break

16.15 – 18.00: **Session 2: Demonstration Feed-back**

Session Chair: Olivier Bucheli, HTceramix SA, CH

- Keynote presentation: Plateforme MYRTE - Project development and operational experience. Philippe Poggi, Université de Corse, FR (30 min)
- Keynote presentation: Demonstration of innovative Power-to-Gas technology. Roland Doll, EtoGas, DE (30 min)
- Guest talks (2 x 20 min)
 - The role of Solid Oxide Electrolysis in the context of future energy scenarios in Denmark. John Bøggild Hansen, Haldor Topsøe A/S, DK
 - The activity of CNR in energy storage. Vincenzo Antonucci, CNR Institute for Advanced Energy Technologies, IT

18.15: Cocktails & Poster Session (ADEL partners, invited speakers and workshop attendees)

Thursday, 9 May 2013

09.00 – 10:30: **Session 3: High temperature electrolysis materials and components**

Session Chair: Martin Roeb, DLR - German Aerospace Center, DE

- Keynote presentation: General overview on material requirements based on the ADEL experience. Karine Couturier, CEA-Grenoble / LITEN, FR (30 min)
- Guest talks (2 x 25 min)
 - Materials for load cycling and reverse SOFC operation at intermediate temperature. Dario Montinaro, SOFCPOWER SpA, IT
 - Analysis of aging phenomenas and corrosion behaviour of steel interconnects in SOEC cells. Ulrich Vogt, EMPA / Swiss Federal Laboratories for Materials Science and Technology Laboratory for Hydrogen and Energy, CH

10.30 – 11.00: Coffee break



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11.00 – 12:30: **Session 4: Process design**

Session Chair: Manuel Romero, Madrid Institute for Advanced Studies (IMDEA), ES

- Keynote presentation: Development of a wind-wave power open-sea platform equipped for hydrogen generation with support for multiple users of energy. Armando Palomar, AWS Truepower SLU, ES (30 min)
- Guest talks (3 x 20 min)
 - Synthetic natural gas via integrated SOEC - methanation plants: a thermodynamic and economic assessment. A. Lanzini, Polito Torino, IT
 - Simulation tools to optimize hybrid renewable systems, HOGA Software. Ismael Aso Aguarta, McPhy Energy S.A., FR
 - Optimal Integration of a SOEC into a solar steam tower plant for hydrogen production. Javier Sanz Bermejo, IMDEA, ES

12.30 – 14.00: Lunch

14.00 – 15.00: Poster session

15.00 – 16.30: **Session 5: Scaling-up and BOP**

Session Chair: Florence Lefebvre-Joud, CEA-Grenoble / LITEN, FR

- Keynote presentation: Challenges for scaling up SOFC and electrolyzers. Valéry Chaudron, AREVA Energy Storage, FR (30 min)
- Guest talks (3 x 20 min)
 - Design and control of high temperature electrolyser systems fed with renewable energies. Floriane Petipas, EIFER (European Institute for Energy Research), DE
 - Design and engineering decisions of the Balance of Plant of the heat transfer process from the nuclear plant to ITSE. Andrés Muñoz Cervantes, Empresarios Agrupados, ES
 - BOP issues in electrolyzer systems. Cristina Lucero, Abengoa Hidrógeno, ES

16.30 – 17.00: Coffee break

17.00 – 18.30: **Session 6: Conclusions**

- Keynote presentation: FCH JU point of view on green hydrogen production. Dr. Jean-Luc Delplancke, Programme Head of Unit (30 min)
- Tour de table for establishing a common workshop summary: main findings and missings (60 min)

20.00: Workshop Gala Dinner (ADEL partners, invited speakers and workshop attendees)

Friday, 10 May 2013

08.30 – 09:00: Transfer to the platform by bus

09.00 – 11:00: Visit to the MYRTE Platform (groups of ca. 10)

approx. 12.00: Expected return to the airport



2nd ADEL International Workshop

2013

2nd ADEL workshop details

Hydrogen Production Systems with Non-Fossil Energy Sources: From Components and Process Design to Large Scale Systems

Workshop sessions

- Session 1: Hydrogen production systems with non-fossil energy sources
- Session 2: Demonstration feedback
- Session 3: High temperature electrolysis materials and components
- Session 4: Process design
- Session 5: Scaling-up and BOP
- Session 6: Outlook, panel discussion

Poster sessions

All participants attending the workshop are encouraged to present at least one poster per organisation. Poster sessions will take place on the Terrasse Tino Rossi in the workshop breaks.

Participants / target groups

Industry representatives, scientists and policy makers.

Number of participants

Maximum of 70 participants. Early online registration recommended. [Registration details](#) available on the ADEL website.

Participation fee

EUR 180

Registration

Online registration on www.adel-energy.eu

Accommodation

Accommodation and local transportation is not included in the registration fee. Participants need to arrange individually their travel and accommodation. Rooms have been blocked at selected hotels, allowing participants to choose a suitable hotel at an ADEL discounted rate (pre-negotiated: 120 - 130.00€).

- [Hôtel San Carlu](#), 3*, 5 minutes walking to Palais des Congrès, downtown Ajaccio
- [Hôtel Best Western](#), 3* 10 minutes by car from Palais des Congrès on city suburb
- [Hôtel Mercure](#), 3*, 10 minutes by car from Palais des Congrès

Rooms at our partner hotels are available on a first-come, first-served basis. Prices do vary according to season, therefore please quote «ADEL Workshop-Palais des congrès d'Ajaccio» and confirm the exact price of the room with the hotel directly.



Venue

Palais des Congrès
Quai l'Herminier
20179 Ajaccio
Corsica, France

www.2a.cci.fr