



# HYRREG

**Plataforma para impulsar la  
Economía del Hidrógeno en el  
Suroeste Europeo - SUDOE**

Financiado por:



UE / EU - FEDER / ERDF



coordinador



Asociación para el  
desarrollo de la  
economía del hidrógeno  
en Aragón  
[www.hidrogenoaragon.org](http://www.hidrogenoaragon.org)



[www.iat.es](http://www.iat.es)



[www.inta.es](http://www.inta.es)



Castilla-La Mancha  
[www.jccm.es](http://www.jccm.es)



Universidad  
Rey Juan Carlos  
[www.urjc.es](http://www.urjc.es)



cinttec  
Universidad Rey Juan Carlos  
[www.urjc.es](http://www.urjc.es)



Asociación de  
Productores de Hidrógeno  
Asociación  
<http://blogs.enstimac.fr/phyrenee/>



PHYRENEES  
Association Hydrogène  
[www.enstimac.fr](http://www.enstimac.fr)



[www.hyrreg.eu](http://www.hyrreg.eu)

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**Generating platform of projects to  
boost the Hydrogen Economy in the  
European Southwest - SUDOE**



## ABOUT THE PROJECT

**HYRREG** is an initiative financed by the European Commission through the Interreg IVB SUDOE Programme to foster the Hydrogen Economy in Southwestern Europe (SUDOE area). Hyrreg is a 30-month project, which started in April 2009 and will be finished by October 2011.

## OBJECTIVES

- To increase the competitiveness and industrial development for hydrogen technologies and fuel cells.
- To create a platform for the generation of technology and development collaboration projects between Enterprises, Universities and Technology Centres.
- To create a road map of the hydrogen economy, in order. To foster the introduction and implementation of these technologies in the SUDOE area.

## WHO CAN PARTICIPATE?

**SMEs, Companies, Research Centres, Universities, and any organization interested in Hydrogen Technologies.**



## PARTNERS

### SPAIN

#### 1.FUNDACIÓN PARA EL DESARROLLO DE LAS NUEVAS TECNOLOGÍAS DEL HIDRÓGENO EN ARAGÓN

##### ARAGÓN

[www.hidrogenoaragon.org](http://www.hidrogenoaragon.org)

The Foundation for the Development of New Hydrogen Technologies in Aragon is a private, non profit entity. Promoted by the Government of Aragon, it was founded in 2004 with the support of the Administration, industry and the main society actors in a board of 61 members.

The mission of the Foundation is to promote the use of hydrogen as energy vector. Our work is focused on two areas: Engineering and Consultancy and Research and Development, in which own lines of research are development, as well as external and associated projects with other research centres, R&D departments of companies and other entities.

#### 2.INSTITUTO NACIONAL DE TÉCNICA AEROESPACIAL

##### MADRID

[www.inta.es](http://www.inta.es)

INTA is a public research establishment specialized in research and aerospace technological development. It is an independent organisation belonging to the Spanish Ministry of Defence through the State Secretariat for Defence.

INTA was founded in 1942. At that time, the primary functions of the institute were focused on providing technical support to aeronautical services and authorities, and technical assistance to the aeronautical Industry. Such tasks are still being carry out, in addition to many others tasks mainly related to our projection into other

Mission: INTA's most relevant goal is to obtain, preserve and increase the level of technology to be applied in the aerospace sector. The Institute contributes to defining objectives, programmes and projects related to aeronautics and space science, providing technical support, assessment and services to official bodies and agencies, and to industrial or technological enterprises as well.

#### 3.INSTITUTO ANDALUZ DE TECNOLOGÍA, IAT

##### ANDALUCÍA

[www.iat.es](http://www.iat.es)

The Andalusian Institute of Technology (IAT) is a Centre for Innovation and Technology created as a private non profit Foundation. It is located in Seville and Malaga (Spain) and has been certified as being of public interest. Operating under strictly professional criteria, its goal is to assist companies and institutions to improve their performance in a sustainable manner, while providing value through innovative solutions. In order to do so, it helps them to adapt to technological changes and boosts innovation processes and continuous improvement by providing advanced technical services. Its main areas of expertise include: Innovation and Technology, Information Technologies, In-company innovation management, Environment, Energy, Quality and R&D+I Management, Training and Knowledge Management Systems and Industrial Design.

#### 4. JUNTA DE CASTILLA-LA MANCHA

##### CASTILLA LA MANCHA

[www.jccm.es](http://www.jccm.es)

The main responsibilities and powers of the regional Ministry of Education and Science of Castilla-La Mancha are:





- Technological development in the regional, national and international public and private sectors in all areas of knowledge.

- Promoting research and technological development of regional industry in all areas.

- Development of science parks and technology centres.

- Creation of new cooperation programmes between public and private research institutions, mainly SME's research programmes.

- Proposal and coordination of local, national and European research programmes.

## 5. UNIVERSIDAD REY JUAN CARLOS - CINTTEC

**MADRID**  
[www.ursc.es](http://www.ursc.es)

Universidad Rey Juan Carlos (URJC) is a public university based in Madrid with two research groups working in Hydrogen and related technologies: the Chemical and Environmental Engineering Group and the Chemical and Energetic Technologies Group.

On the other hand, **CINTTEC** as Technology Transfer Office of the URJC, is in charge of promoting and managing the technology development between the University and industry, including Projects and IPR management. On behalf of the Comunidad de Madrid, **CINTTEC** has been providing technical support for energetic issues since 2002, managing the "Círculos de Innovación" Programme, which provide support to both public institutions and companies by developing Technology Watch Reports and Freedom to Operate Reports in the energetic area. Moreover, CINTTEC plays a role as coordinator of the project funded by the Ministry of Science and Innovation (MICINN) on developing a platform of collaborative projects with companies and research institutes in the field of hydrogen and fuel cells (H2 Evolution

Likewise, CINTTEC is a constituent member of the Ibero-American network CYTED of hydrogen, and member of the executive board of the Spanish association on Hydrogen (AeH2). It is also a national coordinator of the working group on production of hydrogen from renewable sources of the Spanish platform on Hydrogen and Fuel cells (PTE HPC) since its inception.

## FRANCE

### 6. ECOLE DES MINES D'ALBI CARMAUX

**MIDI-PYRÉNÉES**  
[www.enstimac.fr](http://www.enstimac.fr)

Founded in 1993, the École des Mines of Albi-Carmaux (EMAC\*) is an undergraduate training institute for engineers and a post graduate research centre under the guidance of the French Ministry of Economy, Industry and Employment. The school is part of the wider Group of 7 Ecoles des Mines, which shares a long experience in the training of leading-edge engineers in direct response to industrial demands.

EMAC is member of the "PRES Université of Toulouse" which gathers all higher Education Institutions of Midi-Pyrénées. EMAC is specialised in the training of "generalist" engineers, while its research programme is developed in specific areas to process engineering, equipment and tools for material forming, and industrial engineering.

Up to the present the school has bestowed 1600 engineering degrees, 160 PhDs and contributed to the creation of 15 companies.

EMAC, in particular, is member of the Hydrogen association PHYRENEES.

### 7. ASSOCIATION PHYRENEES

**MIDI-PYRÉNÉES**  
<http://blogs.enstimac.fr/phyrenees/>

The association PHYRENEES was founded in October 2007 and has several charter members: French companies, small



and medium sized firms, local authorities, research centres, the General Council of the Tarn Departement, the Midi-Pyrenees Region, independent associations and the French National Authority for the environment and energy saving.

The purpose of this association is to promote the creation of a «hydrogen community» in the Midi-Pyrenees region, by structuring from available resources to the final use. Its aim is to develop hydrogen technologies for sustainable development.

Among the actions that PHyRENEES wants to develop in the Midi-Pyrenees region are the following:

- communication and public information
- training activities.
- contributions to defining the new regulatory framework.
- demonstration of various and large scale operations.
- research and development projects.
- measures to accompany the industrial and tertiary sectors.

Actions are engaged by the association at regional, national, trans-national and European level.

## PORTUGAL

### 8. INSTITUTO DE SOLDADURA E QUALIDADE (ISQ)

**LISBOA**  
[www.isq.pt](http://www.isq.pt)

ISQ is a private and independent organization, founded in 1965, offering technical inspection, training and consultancy services, supported by research and development activities and by accredited laboratories.

results from our commitment to offer high quality services. Our activities are rooted in a constant growth of knowledge and technology with a view to offering our clients and partners the best global solutions, and those which are most suited to their needs.

Our growth strategy involves an ever larger sustainable presence in the world, with offices, delegations and associated companies in Angola, Algeria, Brazil, China, Cuba, Spain, French Guiana, Iran, Mexico, Norway and Turkey.

Its mission is to contribute to the constant improvement of Portuguese industry and services, resulting in an expanded international presence, by collaborating with the state, regional councils and businesses with regard to the sharing and development of technology, new products and processes, structured management practices and quality control, hygiene and safety, energy conservation and environmental protection, and systematic maximization of human resources.

### 9. INSTITUTO SUPERIOR TECNICO, UNIVERSIDADE TECNICA DE LISBOA

**LISBOA**  
[www.ist.utl.pt](http://www.ist.utl.pt)

The Instituto Superior Técnico (IST) is the largest and most reputed school of Engineering, Science and Technology and Architecture in Portugal. Since its foundation in 1911, IST's mission is to provide top quality higher education, as well as to develop Research, Development and Innovation (RD&I) activities according to the highest international standards.





## What has been done so far?

Among the outcomes achieved by the project in 2009, the signature of **cooperation agreements** with different entities at national and European level may be emphasized. The agreements have an ultimate goal of setting a stable network for public-private cooperation and coordination that contribute to the promotion of projects and enable the contact between companies and research centres. Agreements have been already signed with the Latin American Energy Network of Energy, the Energy International Innovation Unit (IIU), the Spanish Hydrogen Association, the *Red Aragón 7PM* (a network of research of the autonomous region of Aragon for the 7<sup>th</sup> Framework Programme), and the Portuguese Hydrogen Association. Other 4 agreements are expected to be signed in order to gather the largest number of entities to work jointly on the promotion and development of new hydrogen technologies in the SUDOE area. This constitutes an important opportunity especially for SMEs to positioning and diversification of their products and services.

In 2009, the Platform has contributed to the **launch of 26** regional, national or European **projects** in the SUDOE area which Companies, research centres and SMEs are involved. The Platform has contributed to those projects by searching for financing and partners, helping to elaborate the technical report or to manage aid. As a result, 19 of the 25 projects released in public announcement are national projects, and the other 5 are international projects. New proposals are currently being carried out in order to improve on in 2010 the results of 2009.



Finally, the **first annual catalogue** has been published. It includes the profiles of all companies and research centres we have contacted and which have sent technological requests and offers. It also includes the different existing public lines of financing for the launch of projects. This way the catalogue will enable firms to find partners, technology or sources of financing for their projects, along with the web tools provided by the Platform HYRREG.

## Events

Since April 2009, when the project started, partners have performed a great work of dissemination to make HYRREG known. To achieve this, they have been involved in the organization of a meeting for technology transfer in the Fair GENERA 2009 (Madrid, May 2009) and presented the project in the Seminar organized by the Spanish Hydrogen Association in the same Fair of Energy. An oral presentation was given in **HYCELTEC 2009** "II Iberian Symposium on Hydrogen, Fuel Cells and Advanced Batteries," (Villa-Real, Lisbon, September 2009) and in **Wind-H2 Power Expo** (Zaragoza, September 2009), where the project was also disseminated in a stand.



In November 2009 a national seminar on the HYRREG project was held in Aragon. It was attended by Mr. Aliaga, Minister of the Regional Government of Industry, Tourism and Trade of Aragon; Mrs. Valladares, Manager of the Hydrogen Implementing Agreement (International Energy Agency, EEUU); Mr. Fernandes, Technical University of Lisbon (IST) and Mr. Navarro, General Manager of Industry and Trade (Government of Aragón).





## Upcoming Events

Coordination of the Technology Transfer Day in the framework of the GENERA 2010 Fair

When: May 20, 2010  
Where: Madrid, Spain  
Website: [www.hyrreg.eu](http://www.hyrreg.eu)



### HYRREG coordination meeting

When: June 8-9, 2010  
Where: Zaragoza, Spain  
Website: [www.hyrreg.eu](http://www.hyrreg.eu)



### CONAPPICE 2010

When: June 16-18, 2010  
Where: Sevilla, Spain  
Website: [www.appice.es](http://www.appice.es)



### International Fair of Energy and Environment (GENERA) 2010

When: May 19-21, 2010  
Where: Madrid, Spain  
Website: [www.ifema.es/ferias/genera/default.html](http://www.ifema.es/ferias/genera/default.html)



### WHEC 2010 World Hydrogen Energy

When: May 16-21, 2010  
Where: Essen, Germany  
Website: [www.whec2010.com](http://www.whec2010.com)



### WasteEng 2010, Beijing

When: May 17-19, 2010  
Where: Beijing, China  
Website: [www.wasteeng10.org](http://www.wasteeng10.org)



### Pro'energy: Technological Business Meetings 2010

When: May 3-4, 2010  
Where: Perpignan, France  
Website: [www.wasteeng10.org](http://www.wasteeng10.org)



### Fuel Cells Science & Technology 2010

When: October 6-7, 2010  
Where: Zaragoza, Spain  
Website: [www.fuelcelladvances.com](http://www.fuelcelladvances.com)



## News

In 2010 all activity related to Technology Watch Reports, Competitive Intelligence Reports, Patent studies, and the State of the Art will be reinforced. It all will facilitate the **promotion of new projects** through the Platform.

It should be highlighted the fact that the **annual catalogue** will be published this year. It will include the profiles of all companies and research centres that participate in the programme HYRREG.

Not less important is the work that is being carried out to define the **Roadmap** to enable the implementation of hydrogen technologies in the SUDOE area. Once the entities of interest in each region of the SUDOE area were identified, a series of surveys have been held. They are aimed at obtaining reliable and agreed data of the possible regional energy chains, specific conditions of the region, and preferences for the later analysis using techno-socio-economic models. They are also aimed at the validation of the best results obtained in order to reflect the real conditions.

Once the period for gathering information is finished, five **workshops** and some regional and interregional seminars will be organized throughout 2010. Their goal is to exchange opinions with both companies and research centres about the conclusions that will be drawing and to validate the results that will be obtaining.

Regarding other kind of more transversal activities, the **first HYRREG contest of ideas** is being organized to contribute to the creation of technology-based firms. The competition is coordinated by the French partners and will be disseminated to all SUDOE area. The competition seeks the highest participation as many opportunities for launching new initiatives related to the hydrogen technologies may arise from it.

## Are you interested in HYRREG? Come and join us!

If you are interested in the project and wish to obtain more information, please contact HYRREG partner in your region:

### SPAIN

- Fundación para el Desarrollo de las Nuevas Tecnologías del Hidrógeno en Aragón

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- Instituto Nacional de Técnica Aeroespacial (INTA)

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- Association PHYRENEES

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