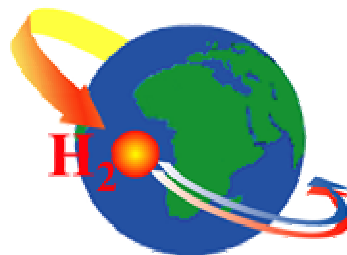


**The Democratic and Popular Republic of Algeria
Ministry of Higher Education and Scientific Research**

Research Centre of Renewable Energies Development



**ALGIERS DECLARATION ON HYDROGEN
FROM A RENEWABLE ORIGIN**



**First International Workshop on Hydrogen:
Energy vector from a renewable origin
Algiers, the city of sciences
June 21-23, 2005**

Algiers Declaration on Hydrogen From a Renewable Origin

At the end of the *first International Workshop on Hydrogen: Energy vector from a renewable origin*, the scientific experts present declared unanimously that:

- The energy systems set up by mankind should be thought in a prospective and sustainable development vision.
- The respect of the Kyoto protocol directives is an absolute necessity for the protection of our planet.
- The reduction of greenhouse gas emissions, particularly those of CO₂, should be guaranteed in order to avoid serious and irreversible climatic disorders.
- The reduction of toxic emissions, responsible for the atmosphere pollution in urban centres, becomes an urgent need.
- The substitution of the unavoidable and predictable hydrocarbon's depletion during the next decades, should be prepared by the set-up of sustainable energy systems respectful of the environment.
- The developing countries should be able to follow their development and satisfying their increasing energy needs. The energy supply should be achieved at reasonable costs.
- The energy supply for the European countries should be achieved in a sustainable way, and should be kept away from political changes, and unavoidable international tensions, without hesitations in the hydrocarbon substitution process.
- The progressive recourse to renewable energies, respectful of the environment becomes an unavoidable necessity.
- Solar energy comes at the first rank in the available energy resources of our planet.

- Countries of the Mediterranean belt, particularly those of the southern side: Morocco, Algeria, Tunisia, Libya, Egypt... have a considerable solar energy resource, higher by many magnitudes than human energy needs.
- The current technology advances make possible the development of efficient and economically viable systems based on the exploitation of the solar resource for energetic purposes.
- Hydrogen is recognised by the international scientific community as an ideal energy vector and has no equivalent.
- Hydrogen, future energy vector, can be produced efficiently and economically from solar energy. Most of the technologies to be implemented have been already developed in the majority of the countries that attended the Workshop. International scientific and industrial cooperation are essential to reach the master of powerful and viable technologies.
- For the benefit of all, scientific and industrial collaborations should be set up between Northern and Southern Mediterranean countries. Such collaborations are essential to achieve, as early as possible, the exploitation of the immense solar energy resource in the Maghreb countries for the production of solar hydrogen.
- The Northern countries have to contribute actively to this development given their significant means, by bringing their technology for the production, transportation and the use of solar energy hydrogen produced in the Southern countries.
- Algeria is today, one of the principal industrial producers of hydrogen from hydrocarbons, in the world.
- The existence of Trans-Mediterranean gas and pipelines network will probably allow the transportation towards the North of hydrogen produced in Southern Mediterranean countries. Such option is already in study in Europe in the framework of the so-called "*NaturalHy*" integrated project.
- The Northern as well as the southern countries, will thus, benefit from a reliable, sustainable and viable energy supply.

The Scientific Experts present at the Workshop recommend also:

1. The creation of a Hydrogen Research Unit based in the Renewable Energies 'EPST'.
2. The proposal of a Research-Development domain exclusively devoted to hydrogen in the framework of the National Research Program on Renewable Energies.
3. The creation of an Algerian Association of Hydrogen (A2H2).
4. The creation of an International Institute of Hydrogen in Algeria.
5. The launch of a large Maghreb-Europe cooperation project for the development and the exploitation of solar energy hydrogen produced in the Maghreb countries.

This project aims:

- To develop the most powerful technologies for hydrogen production by mean of the sun's energy. The hydrogen can be produced, depending on the cases, from water, hydrocarbons, or renewable fuels resulting from biomass.
- To develop long distances hydrogen transportation technologies: gas and pipelines, maritime and terrestrial transports.
- To test the components and the systems in sites fully equipped for this purpose.
- To evaluate, compare and validate the most powerful technologies in view of a large-scale industrial development.
- To census the potential of R&D and industrial actors likely to contribute to such development.
- To undertake technical and economic studies in order to implement an industrial strategy and develop a solar hydrogen field.

To allow the launch and animation, the countries member States of the project have designated the CDER as responsible for coordinating the efforts between the Maghreb countries, and CETH (European Company of Hydrogen Technologies) as responsible for coordinating the efforts in the Northern countries of the Mediterranean Sea.

The Scientific experts present in the *First International Workshop on Hydrogen: Energy vector from a renewable origin*, confirm their unanimous adhesion for implementing this declaration.

Algiers, the city of sciences
June 23rd, 2005