French declaration at the ministerial meeting on the International Partnership for Hydrogen Economy (IPHE), Washington, nov. 20, 2003

Mr Secretary Spencer Abraham, Ministers, Distinguished delegates, Ladies and Gentlemen

Madame Claudie Haigneré, the French Minister in charge of Research and New Technologies, asked me to convey to the US authorities her warmest thanks for their kind invitation to France to participate in this highly promising IPHE initiative.

Mme Haigneré was unable to come to Washington due to France's commitments related to the imminent decision on the choice of the European site for the nuclear fusion ITER project. ITER is another important international R&D program which demonstrates the large added value of a worldwide cooperation in the field of energy.

I would like to begin by expressing that France strongly welcomes the IPHE initiative. France wishes IPHE the greatest success and wants to be a valuable contributor to this ambitious effort.

From our point of view, the need for increasing the R&D efforts on hydrogen can be mainly found in the broader context of getting a worldwide sustainable development, as soon as possible.

Fossil fuels, coal, oil and gas, currently meet more than 85 % of world energy needs and will certainly continue to remain dominant for some time. There is also certainly no longer any doubt that the rising level in atmospheric carbon dioxide is due to our growing use of these fuels without any containment of carbon dioxide emissions.

The latest report of the Intergovernmental Panel on Climate Change (IPCC) predicts that the effects of continuing of carbon dioxide emissions on the earth's climate will result in a very

negative outcome and will have significant and damaging effects on our economy and on our conditions and way of life. We must face these challenging questions.

The exploration of the hydrogen economy by France started many years ago and has increased over the last years. One of the most promising way so far is biomass transformation and hydrogen enriched synthetic fuel, which offer a smooth transition towards a future hydrogen economy. Another path which is jointly considered by France and other countries, in particular the United States, in conjunction with the Generation IV nuclear power program, is hydrogen produced by “Very high temperature reactors”.

A national debate on Energy was organized in France this year with the objective of determining the basis for a programmatic law regulating the energy sector in the next decades. The main conclusions of this debate were included in the « White Paper on Energy » presented last week by the French Minister of Industry, Mme Nicole Fontaine. It will serve as a basis for defining a bill to be submitted to the parliament early next year. Some of the main conclusions, in agreement with the long term coherent energy policy that France follows since many years, entail,

- First, energy conservation, increased efficiency and optimization of the use of the available energy resources.
- Secondly, limitation of Green House Gas emissions. Let us think that to-day, the world emits 7 billions tons of carbon equivalent per year, while only 3 billions can be absorbed by the oceans and the land cover. By 2050, if we do not change our behaviour, emissions are predicted to be in the order of 12 billion tons, i.e. four times the natural absorption capacity.

In France fortunately today, the emission of green house gas is limited by the choice of hydraulics and nuclear energy to produce more than 95% of our electricity. The numbers speak

for themselves: 6 g of carbon dioxide per kWh for nuclear energy, 430 g per kWh for methane and 1000 g per kWh for coal.

But, unfortunately, neither in France nor elsewhere, any solution has yet been found for vehicle transportation, though, about half of carbon dioxide emissions in France come from this sector and its demand for energy is still continuously growing. It is the reason why the French Prime Minister recently asked for an ambitious clean vehicle national program.

Research on hydrogen as an energy carrier is of special interest, but the challenge is formidable given the large number of possible research routes.

France agrees that it is in the world's best interest to create a forum to exchange ideas, elaborate R&D cooperative program and share demonstrating prototype and technological plate-forms, regarding the production, the distribution and the use of hydrogen.

It is essential that we define together common safety rules, codes and standards, before it is too late and different choices are made around the world. This would be damaging for industrial efficiency and commercial exchanges

The IPHE initiative is a major opportunity to foster international collaboration on hydrogen R&D with an appropriate public-private partnership. Given the diversity of problems and the formidable R&D challenges, France agrees that there is a distinct need for constructive interaction among public research organizations and industry at the world level. The lack of such interactions could lead to the costly duplication of effort, the neglect of certain promising routes of research, and an inefficient planning.

I would also like to emphasize that for the France, the most natural cooperation framework is on the European level. Thus, France was very pleased with the European initiative on Hydrogen and the conclusions of the high-level group presented last June in Brussels. However, we feel that this will not be sufficient. Developing a new economy based on hydrogen as an energy

carrier is a great challenge. Given the importance of the research efforts needed, the cooperation on a global scale is necessary to reach our goals as soon as possible. We are very pleased that the European Union will be as France and others European countries members of IPHE.

Dealing with intellectual and industrial property rights may not be easy, but, we believe that developing a coherent initiative on a global scale will allow a faster emergence of innovative techniques to use hydrogen as an energy carrier.

So, on behalf of France, I will be very pleased to sign the terms of reference of the IPHE in a few minutes.

In conclusion, France would like to thank the Department of Energy and the United States Government once again for the very useful IPHE initiative and their kind invitation.

Thank you for your attention.