

**2nd meeting of the
International Partnership
for the Hydrogen Economy
(IPHE)**

**Address by Mr Devedjian
French Minister Delegate for
Industry**

28 January 2005

- Ladies and Gentlemen,
- The energy sector is a source of innovation and technological breakthroughs that have the capability of reducing **our countries' energy dependence and making a crucial contribution to reducing our greenhouse gas emissions.**
- These new energy technologies cover technologies promoting the use of renewable energy sources for the generation of electrical and thermal power as well as energy efficiency, the new generation of nuclear power plants, CO₂ capture and sequestration and finally **the generation of hydrogen and its use in fuel cells.**

- Our energy future **depends on** our mastery of these new energy technologies. It also provides a wonderful opportunity **to boost** the competitiveness of our economy and businesses.
- The International Energy Agency estimates that between 2000 and 2030, investments of **16,000 billion US dollars** will be needed in the energy sector in order to meet demand. Growth in certain energy technologies is also **on a par** with the highest performers from among information and communication technologies.
- Some estimates predict that the combined world market for solar, wind and hydrogen power and fuel cells could rise from **13 billion US dollars in 2003 to more than 90 billion US dollars by 2013.**

- It was with these issues in mind that the French Government last year tabled an **energy bill** before Parliament, setting the broad outlines of national energy policy for the coming decades and providing a framework for all the measures that are to be taken.
- I will present the main orientations of this **renewed energy policy (I)** and show how our **research and industrial policies (II)** can support the development of hydrogen economy.

I - A renewed energy policy

The 4 pillars of French energy policy are:

- ✓ To guarantee **national energy independence** and security of supply
- ✓ To protect the **environment** and step up efforts to reduce **greenhouse gas emissions**
- ✓ To guarantee energy at **competitive prices**
- ✓ To guarantee **social and territorial unity** by ensuring energy access for all.

- The bill in particular sets **quantified objectives** for renewable energies and for the reduction of energy consumption by the 2010-2015 time-frame.
- I would recall that France has also set itself the goal of reducing its greenhouse gas emissions **by a factor of 4** by the year 2050. These goals may well be ambitious, but they are **not unrealistic**.

- To reach them, **R&D into the new energy technologies has been clearly identified as a key area of energy policy.** This is why the Government intends to make a **significant increase** in the overall research effort in this sector.
- Parliament also asked that the Government draw up a **national energy research strategy** every 5 years, stipulating the priorities and setting the framework for cooperation between the public and private research sectors. The Government will send Parliament an **annual report** on advances in the new energy technologies.

- To ensure that investments were made in the most promising technologies, **extensive consultation** was carried out over the past two years with researchers, industry representatives and government officials.
- This resulted in operational proposals for national action programmes with a strong industrial bias and covering 4 topics: renewable energies (solar power and biofuels), CO₂ capture and sequestration, positive energy buildings and finally hydrogen and fuel cells.

- Since 1998, a number of **multidisciplinary research** projects have been funded by the Ministries for Research and Industry as part of the national research and technological innovation network for fuel cells, which brought a degree of **organisation and structure** to the sector and in recent months enabled the stakeholders **to broaden the scope** of their work to the entire hydrogen sector.
- A detailed and ambitious road-map is currently being drafted and will soon be submitted to the Government. It assumes at least a **tripling of the resources** hitherto devoted to this sector, **up to 240 million Euros for 2005-2010.**

II - A fresh start for French industrial policy

- In addition to an overhaul of energy policy, this work and these guidelines for hydrogen and fuel cell research must be placed within the context of a new public research and innovation policy.
- The representative of Mr DAUBERT, Minister Delegate for Research, has already presented the new R&D organisation built around the National Research Agency. The new energy technologies will be allocated one of the largest budgets, which clearly shows the importance the Government attaches to this sector.
- **I would however like to mention its counterpart, the Agency for Industrial Innovation.**

- In his first address of 2005, the President of the French Republic expressed his desire to restart **an ambitious policy of major industrial programmes** in dynamic technology sectors likely to make a significant contribution to economic growth and create new jobs.
- Mr BEFFA, Chairman of Saint Gobain, submitted concrete proposals for this policy, which has been given high priority by this Government.

- The first task will be to ensure **good coordination** between the public research sector and private companies, and to help these companies **deal with the high risks** they will have to face.
- These risks are inherent in all innovative activities but they are made all the greater by the level of initial investment required and the current economic climate which is not exactly favourable to risky investments.
- **The proactive approaches by the governments of the USA and Japan are a good illustration of an effective policy of support for high-tech industries and they must inspire to us.**

- The Agency for Industrial Innovation will be operational **by next June**, so that in 2005 it will be able to launch and finance the **innovative industrial programmes** it has selected in close collaboration with private stakeholders.
- This Agency will be under the **authority of the Prime Minister**. Between 2005 and 2007, it will receive appropriations of **at least 2 billion euros** and will interact with the other public structures involved in research, in aid for innovation, aid for companies, and regional development.

- These programmes are designed to finance **pre-competitive research**, tailored to market needs, for example in the form of demonstrators or pilots. They will last **between five and ten years** and the amount of public financing is estimated at **between 30 and 150 million euros per year and per project**, for a period of about five years.
- Of course, not all the programmes have yet been selected, but **the President of the French Republic clearly indicated that a hydrogen and fuel cells programme would be chosen**, as it meets the selection criteria, in particular with a strong innovative component, the involvement of major economic players, and a medium-term time-frame of between five and fifteen years, depending on the applications.

- The foreseeable applications are both stationary - doubtless more accessible in terms of marketability - and longer-term transport-related applications, not forgetting all the activities linked to the generation, storage and distribution of hydrogen.
- Naturally, once a product is marketed, it could enjoy **specific support mechanisms**, such as tax credits for private individuals.

III - Conclusion

- To conclude, I will underline that the Agency for Industrial Innovation and the National Research Agency are the **two matching pillars** of France's new hydrogen and fuel cells research policy, and are part of a long-term energy policy.
- They must also form part of European and international partnerships, a partnership between States of course, but also between public and private players.

- At the European level, France has proposed that new energy technologies should be **strongly supported** in the 7th framework program for research and development
- At the international level, I am convinced that together, within the IPHE, we are **paving the way for the industry and economy of the coming decades of the 21st century.**
- I thank you for your attention.