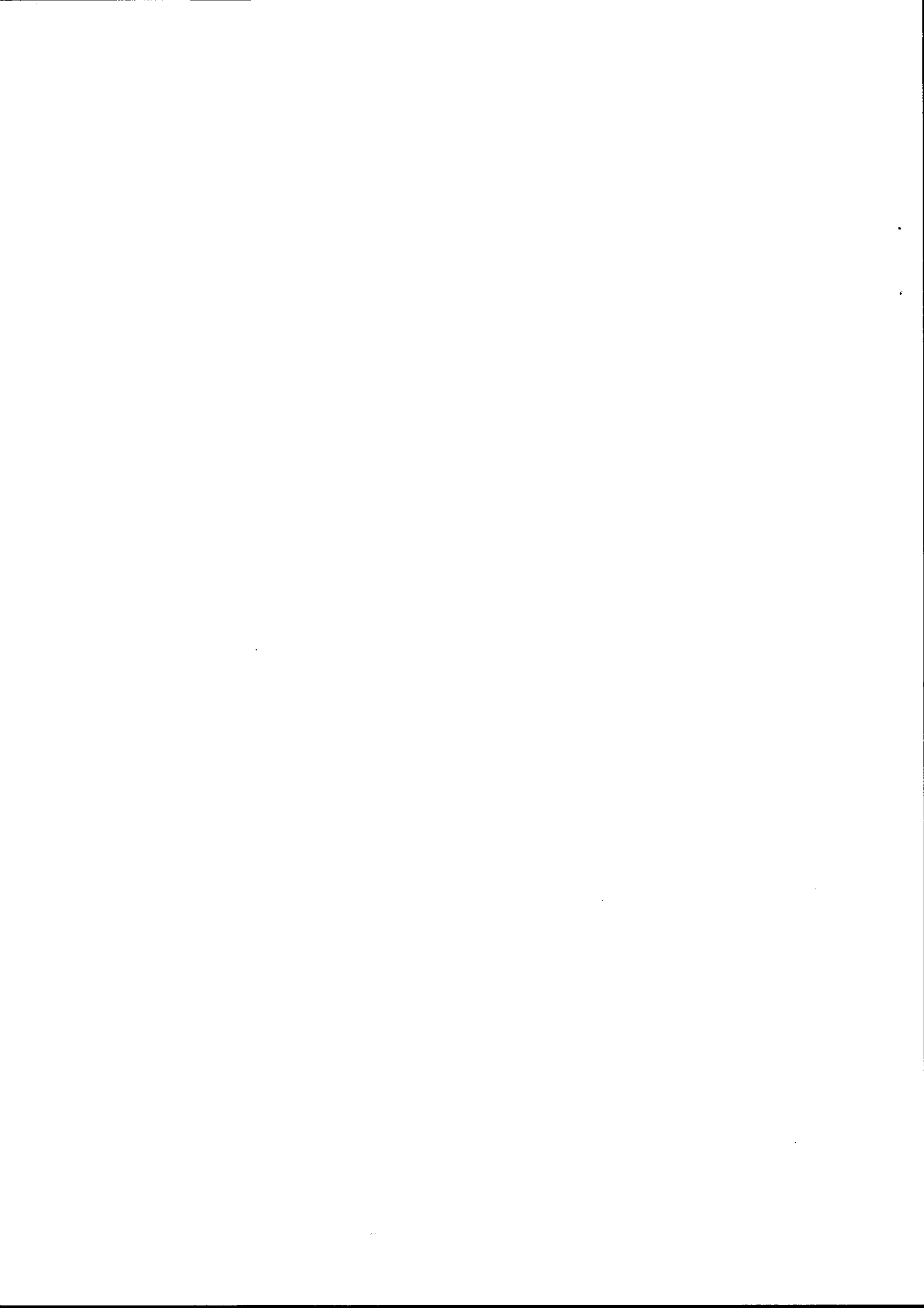


**"Sustainable Development : A Role for Nuclear Power?"**  
**The Nuclear Option in Perspective**  
**Public Information**

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## 1 Introduction

As we all know, nuclear power is a technology that has developed over the past 40 years, rapidly improving and growing since it was first introduced as a major industrial tool in the early 1960s. Operating nuclear power plants offset 1.8 billion tons of CO<sub>2</sub>/year, assuming the current world mix of electricity generation. Nuclear electricity balances the effect of emissions of other greenhouse gases including SO<sub>x</sub> and NO<sub>x</sub>.

From the technological, industrial and economic point of view the development of nuclear power has been a real success story. Currently operating plants demonstrate that nuclear energy is economic. There are no significant external costs associated with nuclear energy because in most countries, the full costs of waste management and plant decommissioning will be funded from reserves accumulated from current revenues. This is generally not the case for other energy sources.

If the commitments in the Kyoto Protocol, to protect the climate, are to be maintained as global population and energy demand increase, long-term energy mix strategies must be developed to decrease the fossil fuel dependence currently observed throughout the world. In order to create the economic growth necessary for future generations, a key element in this strategy should be a continued and expanded use of nuclear energy, along with better use of existing fossil fuels and the development of renewables, as well as conservation of energy.

In examining today the concrete situation of nuclear power in the European Union, the following observations can be made:

- \* The outstanding operation of the nuclear power plants, which supply 35% of the electricity for the European Union with remarkable reliability and competitiveness while not emitting greenhouse gases.
  - Improved safety features have been constantly implemented
  - The availability of the nuclear power plants has improved continuously
  - Many plants have been upgraded to produce more power than originally foreseen
  - The radiation exposure of the operating personnel has drastically decreased.
- \* Despite this excellent performance, certain political groups question the use of nuclear energy and suggest its abandonment, creating a climate which leads to decreasing acceptance of nuclear energy.

## 2 Public Perception of Nuclear Energy

What comes to mind of the public when it thinks of nuclear? What are their most fundamental concerns? And what can we do to bring about more favourable views on nuclear energy? To regain public confidence to change public and political perception we must be more successful in communicating with the public. It is one of the prerequisites for a revival of nuclear energy after 2000.

Historically, in the view of the public, nuclear energy was surrounded by an atmosphere of secrecy. Nuclear technology was often associated with military purposes and the silence from the industry was universal and complete. Nevertheless, the development of nuclear energy was widely supported during the early years and nuclear scientists and engineers were highly respected.

The technique of communication used by the nuclear industry in the early days was the DAD approach; Decide Announce Defend. Openness and transparency were practically unknown. The industry was not prepared for this situation and announced news/decisions to the public without allowing for enough insight and background information. There was in a way, a certain arrogance, the feeling the technology being too complex for the layman to understand. As a result, the industry ended up in a defensive position. For the general public, this approach created a feeling of an industry that was not open and honest. When looking into the future of nuclear energy, these historical aspects have to be taken into account in a reassessment of public opinion on nuclear. The time when governments or industry and science know best" is clearly over. People want to be part of the decision.

Our opponents, the anti-nuclear community, have been very successful in shaping a negative public opinion toward nuclear power. They have provided the media with bold headlines, by clever packaging and using underlining fear tactics. The techniques employed by the greens are: always to use anecdotal evidence and never to mention the advantages of the target, only stress the negatives. Their approach is that time is running out, whether or not the relevant data are in, actions have to be taken immediately. This strategy has unfortunately been very successful and it has often forced our industry onto the defensive.

What can be done to change this scenario? Turning toward the technical aspects, what is of utmost concern to the public are issues related to safety. As mentioned before, the accidents at Three-Mile Island and Chernobyl, undoubtedly, increased the fears and contributed to the negative image nuclear industry. But it also led the industry into designing a new generation of power plants, which include substantially higher levels of safety, against the possibility of radiation release like, for example, the European Pressurised-Water Reactor, the EPR.

A key ingredient to regain public support is to strive for an open, honest and transparent management of the industry. Of course we want to operate our plants at the highest safety standard, but without the open approach, we do more harm

than good. Public confidence will never improve if there is any doubt that we might have withheld information from the public or, even worse, from the authorities. It is important that there is a deep level of trust between the industry, acting under strict regulatory controls and the public, who relies on these controls. This leads to the immediate conclusion that the nuclear industry needs to focus on, and continually search for, ways to build trust.

Another instrument to regain public confidence is to articulate the benefits of nuclear science and technology as a whole. If there were no recognised benefits, the tolerance of the public for any risk will be exceptionally small. This is simply a fact. Here, for example, we have to introduce economic and environmental benefits. Nuclear science and technology in the US in 1995 represented 4% of the GNP and 5% of the total workforce, but does the public know this? This important economic impact comes includes all applications already existing, for the control and use of radioactivity in areas including energy, medicine, food processing, pharmaceuticals and industry. In an industrialised country it is essentially impossible for any citizen, not to come in contact with radiation and its different aspects. However, very few people are aware of this fact.

Climate change has been a buzzword during the last decade. But despite high level conferences and political debates, it seems that the issue of the greenhouse effect is now losing speed as far as the concerns of the general public are effected. Since the negotiations are more and more concentrating on technical details and reducing opposing views on possible solutions, and especially as the solution of intricate technical issues takes time, it appears that the media and the public at large are losing interest.

The nuclear community must be very patient and decided to communicate the virtues of nuclear energy and, slowly but surely, make its way through the terrain, gaining ground one step at a time. At the meetings of the Parties to the UN Framework Convention on Climate Change (UNFCCC), the nuclear industry has started to be present and visible to convey our message to all participants. If you look back to the Rio summit in 1992 where the nuclear industry was not present at all, we have made major progress in explaining the contribution, which nuclear energy can make to limit greenhouse gas emissions as part of the solution. Nuclear has indeed managed to regain some confidence in that political arena.

The Kyoto protocol has little meaning to the general public. Pollution and its effects, however, are something that is evident and understandable, to everyone. Communicating the nuclear connection to emissions avoidance, through concrete examples, could prove very effective. As for example, in Canada, in the province of Ontario, this summer pollution levels worsened dramatically since seven nuclear units were shut down over the summer for maintenance. This situation, coupled with very hot weather, had important consequences. Coal fired units were used instead, using imported coal from the United States. The switch to coal was obvious to the local population because they could see and feel the difference. The air was thick with smog and the number of respiratory illnesses was on the

rise. The economic consequences were twofold for the state. There was a burden created by the large purchases of coal, and medical costs went up considerably. Please remember that Canada has a state funded medical care system. This is a perfect example of the saying: "a picture is worth a thousand words"...

A word of caution though. The nuclear industry must not rely too much on the climate change issue. In the worldwide debate on energy options, the most outstanding factor is competitiveness. The CO<sub>2</sub>-avoidance argument will not be a sufficient on its own; nuclear can only play its role if it is competitive and safe of course.

In Western Europe, we are faced with a clear contradiction. On the one hand, some governments are pushing very strongly for a phase-out of nuclear energy, because they say that the public does not like it. On the other hand, public opinion polls carried out in the same countries show that a majority of the public is favourable to have existing power plants continuing to operate.

The experience of the past two decades shows that the growth of nuclear power is totally dependent on favourable public opinion. This means that one of the keys is to build-up trust with the public. This means first of all we have to make sure that we operate facilities safely, solve the question of radioactive waste disposal and do all this as transparent and open as possible. We need to use a language that the people understand. The messages should show that the nuclear industry acts responsibly, following the strictest safety standards; and, that thanks to nuclear energy, the air is cleaner.

### **3 FORATOM Communications Programme**

Since a change public and political perception is a prerequisite for the revival of nuclear energy after 2000, the European nuclear industry has started to launch a communications programme with the aim of convincing the public of the specific advantage of nuclear energy to meet worldwide energy needs. This applies especially to the generation of competitive and environmentally friendly base load electricity.

This Communications Programme for the European nuclear industry, which was initiated by the European Nuclear Council, officially began on April 1, 1999. It is carefully articulated around our two other main activities, communicating and informing the European Institutions as well as the Brussels based media on nuclear matters. The aim is to contribute to improving public perception of nuclear energy and to act as an information clearinghouse for our clients and target audiences, with a priority to Members of the European Parliament, MEPs, the European Commission, the Brussels based media, the national Fora, and the nuclear industry.

The main audiences of FORATOM are presently the members of the European Parliament the European Commission. The task, which is taken up with highest priority, is the communication with the new members of the Parliament who were elected in June 1999, and the new European Commission, which took office on 15 September 1999.

All information gathered for this purpose is instrumental in the communication of FORATOM, but also benefits the member companies and allow them to adapt their own corporate communication strategy to the new European environment.

Also, the Young Generation is getting more involved in the FORATOM activities, since we realised the important role they play at the UN Conferences of the Parties to the Framework Convention on Climate Change, UNFCCC. FORATOM is closely co-operating with them and will be organising a special event this fall for MEPs and their assistants.

On other matters, FORATOM is putting together an Intranet for the European nuclear Industry and an Extranet for the members of the European Parliament and the European Commission. The Intranet will provide areas for our working groups to exchange information, debate topical issues and disseminate material for further distribution. The system will allow better and more efficient communication between the group members as well as allowing the overseeing groups to monitor how different parts of the organisation are performing.

An Extranet system will be set-up as part of this system from which an invited audience like MEPs, the European Commission, invited experts etc. can obtain up-to-date information on nuclear energy. Topical issues will be debated in specific areas.

Furthermore we will set-up an Internet network of nuclear correspondents, which will be inter-linked, with the aim of counterbalancing the numerous one-sided antinuclear publications in the World Wide Web.

#### **4 SUMMARY**

It is clear that the coming years will not witness a sufficient increase in Europe's electricity demand to justify major new investments for the supply of base load power. Moreover, the strong competition from gas and the political challenges in certain countries mean that the need to build new nuclear power plants in Europe will be very limited in the short term.

The European nuclear industry is nonetheless organising to maintain its ability to innovate, to expand its export capacity and to prepare the renewal of the European nuclear power capability in the medium term. This is a major challenge, and this is why the industry favours both the pursuit of R&D programs and the development of the pioneering EPR project.

Since one of the prerequisites for a revival of nuclear energy after 2000 is to change public and political perception. The nuclear industry has started to organise itself better and to launch a communications programme with the aim of persuading the public of the specific advantage of nuclear energy to meet worldwide energy needs, especially for the generation of competitive and environmentally friendly base load electricity.

The nuclear industry is convinced that, in order to guarantee the supply of energy to a continuously increasing world population and an acceptable standard of living for all people:

- \* All available energy sources must be utilised
- \* The diversity of resources and technologies is the best guarantee for the future economic and social development of our societies.
- \* Nuclear energy is not the only solution of our problems, but it is part of the solution

I am convinced that nuclear energy will continue to play an important role in the 21st century, and I hope that the vast experience and capabilities built up world wide in this area will be exploited for the benefit of present and coming generations.