International Workshop on Public I
AN: 113509
UN: 621.039:659.4 I61
00000967587

INTERNATIONAL WORKSHOP
ON PUBLIC INFORMATION PROBLEMS
OF NUCLEAR ENERGY

PIME 89

XA04C0415

European Nuclear Society and FORATOM
Palace Hotel, Montreux, Switzerland
22 - 25 january 1989

ELECTRICITE DE FRANCE NUCLEAR POWER PLANT INFORMATION ACTIVITIES IN THE EDUCATION SYSTEM

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January 15, 1989

Electricité de France
Nuclear Power Plant Information Activities
in the Education System

The Chernobyl accident in April 1986 significantly changed French attitudes toward nuclear power.

By the end of 1985, 62 percent of the French approved of nuclear power. This level of approval resulted from the fact that:

- nuclear power plants were operating well and nuclear-generated electricity accounted for an increasing share of the power produced - 65 percent in 1985;
- the nuclear power program had been slowing down for several years; in 1985, only one 1300 MW unit was begun (Penly 2), although between 1974 and 1980 an average capacity of 5,500 MW was begun annually;
- following the program slowdown, new sites were spread out further over time; two were opened in 1980 (Penly and Golfech), one in 1982 (Chooz B) and one in October 1985 (Civaux);
- political support was unanimous or almost unanimous.

Since then, public opinion has changed considerably. Four national surveys carried out over the last two-and-a-half years have shown significant decreases in public approval of nuclear energy (43 percent in October 1988). However, there is no current structured opposition to nuclear power plants.

The French public takes nuclear power for granted, but prefers solar energy. It is aware that nuclear power will play an important role in energy supply and that EdF did not build more plants than necessary. It has confidence in the French technique (75 percent), in EdF's ability to operate nuclear power plants without serious incidents (55 percent), and in the ability of EdF engineers to deal with a serious accident (50 percent) even though they believe a serious accident could occur (75 percent).

Although still confident, French public opinion was profoundly marked by Chernobyl. This has resulted in a deterioration of the assessment of the perceived advantages and disadvantages of nuclear power, i.e. fewer advantages (the energy shortage has receded, oil prices are lower, questions about the profitability of nuclear power) and more disadvantages (possibility of a serious accident).

Electricité de France's Information Policy

EdF undertook extensive information programs on nuclear power and energy matters during the first years of the program (1975 to 1983), and followed them by a period of less extensive information focussed on electricity. However, the situation created by the Chernobyl accident resulted in changes to the EdF information policy.

Given the changes in public opinion, the change in the energy context and the different stakes, the main thing was not quickly opening sites and building plants, but preserving what had already been acquired, i.e. maintaining the conditions required for satisfactory plant operation. The following decisions were made.

Relations around the nuclear power plant sites between Electricité de France and the public, elected representatives and the media, which had always been close, were reinforced.

At a national level, it was decided not to implement extensive information programs in order to prevent structured opposition. Rather, visits to nuclear power plants were encouraged. A policy of openness was adopted with the agreement of the authorities. This means that even the most minor incident occurring in a nuclear power plant is made public. In order to give journalists and the public a means of assessing the seriousness of such incidents, the Ministry of Industry published a scale for classifying nuclear incidents and accidents, which are graded from 1 to 6. This scale, based on that used for earthquakes, is being tested until the end of 1989.

The main decisions made consist of informing smaller, but important, segments of the public: the medical profession and education system.

Since the Chernobyl accident, there has been a tremendous increase in demand by the medical profession as a whole and around nuclear power plant sites in particular for information on radioactivity, the effects on health of ionizing radiation and radiation protection in the event of an accident.

Two surveys in 1987 showed that all doctors questioned had a voracious appetite for information in order to be able to answer questions they were asked. In addition, the reaction of the medical profession in the event of an incident is an important factor in public opinion.

Thus, the information activities undertaken are justified. They are targeted at doctors, pharmacists and veterinarians.

The education system is also a major consumer of information on nuclear power. Information activities in this sector are extensive, since they concern both the short term (informing students who in turn inform their parents and an environment open to ecological opinions) and the long term (informing future voters).

Information Packages

Information packages were prepared and distributed. This channel of information is highly appreciated, but is also very expensive.

The corresponding catalogs are mailed out to public and private schools in France and the overseas departments and territories and to French-language schools abroad at least once a year; the catalogs are accompanied by reply coupons.

Two comic strips are available for 8- to 10-year-old pupils in the 45,000 primary schools. One shows how a nuclear power plant operates and the other discusses the environmental consequences of this type of facility.

A larger package is available to the 11,500 junior high schools (11- to 15-year-old pupils) and senior high schools (16- to 18-year-olds). It contains 37 sheets, documents and posters.

Information packages for use in senior high school physics, geography and economics courses are being prepared and will be made available to 50,000 teachers at the beginning of the 1989 school year.

This work is being carried out jointly with the Ministry of National Education. Since the operation began two-and-a-half years ago, more than 7 million documents have been requested and distributed.

Contacts with Textbook Publishers

Textbooks do not always discuss nuclear power plants in a suitable manner. In order to improve this situation, contacts have been made with publishers, directors of series and authors. These contacts have enabled fruitful exchanges of information, especially during visits to nuclear facilities (power plants, fuel enrichment plants, operating simulators). Remarkable results have been seen in the textbooks concerned. This operation began in 1987 and is being continued.

Audiovisuals

Films, usually videocassettes, are loaned out free of charge. Two methods are used. The first consists of systematically including the EdF film library catalog with all documentation sent out. Otherwise, a specialized company distributes several EdF films upon request to a public that primarily consists of education specialists.

Approximately three times a year, EdF purchases 15 minutes' air time on a television channel as part of the "Education Channel" program (Thursdays, beginning at 11:00 a.m.). In 1988, these programs discussed environmental and safety problems with regard to the Nogent and Cattenom nuclear power plants, public opinion, and the results of the nuclear power program. The audience for this type of program averages 2 million viewers, 60 percent of whom come from the secondary, technical and higher education sectors. These programs are often taped and shown several times.

Lectures

Lectures are a channel of information frequently used by schools since they are free, fit well into the program of some grades, and do not take up too much of the students' time (one-and-a-half to two hours).

EdF always replies to requests for lectures. As a result of the high number of such requests, EdF has appointed an association - Ouverture sur la Vie (Opening to Life) - to give lectures to secondary school students. Two lectures are offered: one on electricity and the other on energy.

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Visits: An Excellent Source of Information

Visits provide a channel of information that is particularly appreciated by the public. This is especially true for schools, which account for approximately 30 to 40 percent of all visitors to nuclear power plants, i.e. 100,000 to 120,000 people. During a visit, students tour the facilities, which demystifies nuclear power. They speak to the guides and technicians and are given documentation. A presentation is usually made and a film shown before the visit. The effectiveness of the visit is reinforced when a presentation on nuclear power is made by the teacher or an outside lecturer a few days before the visit.

Information centers are particularly important as they provide a window onto each of the plants concerned. Students are particularly interested in models - preferably animated - and interactive information systems. Videodisks would seem to be a good medium for this type of public.

Local Initiatives

Many local initiatives have been taken by plants and schools.

Of the 12,000 school visitors annually to the Golfech power plant on the Garonne near Valence d'Agen, several hundred arrive by train at the Valence d'Agen station (special reduced rate) and are taken to the site by bus. A special train also took several dozen classes directly to the site using a rail link.

After making contact with the regional educational authority, lecturers from the Golfech power plant will take part in continuing education courses in 1989.

A particularly interesting experiment has been taking place since 1986 at the Penly plant being built on the Channel north of Dieppe: nuclear classes. A complete class accompanied by a teacher spends five days on the site. Tours of the facilities and classroom work are alternated. Talks are given on nuclear power and such subjects as the dangers of electricity and the various trades working on the site. The latter provides insights into real working conditions and current professional requirements. In general, these courses provide accurate knowledge of nuclear power plants and a link between theory and practice. The construction manager presents a certificate to all students on the last day.

These nuclear classes are open to pupils and students ranging in age from 8 to 18 and have been highly successful. Demand exceeds the number of places - 200 annually - available.

Before each class, preparatory work takes place at the school in order to familiarize students with nuclear power and the characteristics of a large construction site.

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Higher Education

No specific activities are undertaken with regard to higher education. Lectures are given, and power and fuel cycle plant tours are organized.

Other possibilities are being studied. It is more difficult to provide information at the higher education level since each institution is a separate case.