

**PUBLIC ACCEPTANCE OF SOLUTIONS PROPOSED BY EDF FOR THE
DECOMMISSIONING
OF ITS FIRST GENERATION OF NUCLEAR POWER PLANTS**

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ABSTRACT

Today in France, one of the most important grievances of our public opinion against nuclear energy is related to the back end of nuclear power plant life cycle i.e. decommissioning and waste final disposal. Although spent fuel is reprocessed and low level waste disposal facilities started operating many years ago there are still some concerns about when and how the already shutdown nuclear power plants will be fully dismantled. Because Electricité de France (EDF) still considers nuclear energy as a safe, cost-effective and environment friendly energy source, it is crucial to give some concrete answers to these questions in order to get the public acceptance for the erection of a new generation of nuclear power plants that will replace the existing one around 2020.

INTRODUCTION

EDF has 9 of its nuclear power plants which have been definitively shutdown and which are currently under decommissioning (6 Gas Cooling Reactors, 1 Heavy Water Reactor, 1 Pressurised Water Reactor and 1 Fast Breeder Reactor).

Until January 2001, EDF's policy regarding the dismantling of its decommissioned nuclear power plants was to reach "level 2" (restricted site release) about 10 years after final shutdown and to postpone final dismantling for another 30-40 years to take advantage of radioactive decay. All the shutdown plants, except Creys-Malville, have reached this stage or are near to completion. Of course, with such a strategy, public opinion was suspicious about the actual feasibility of final dismantling.

Therefore, EDF decided in 2001 to start in the next the few years the final dismantling of these units without waiting for a 30-40 years safe storage period. This new strategy will provide the tangible demonstration of the feasibility of dismantling, from the industrial, waste disposal and financial (adequate funding) points of view.

A detailed decommissioning programme has been defined to implement this new strategy. Engineering studies have been launched to assess various dismantling scenarios in order to choose the most appropriate. Detailed design studies for the dismantling of the first reactor building will start soon with the objective to start the first works on site in 2006 and to have them completed in 2015. In parallel, studies are underway to find disposal routes for specific wastes such as graphite and interim storage facilities for long lived low and intermediate level wastes.

COMMUNICATION TO THE PUBLIC

But dealing with technical issues is not enough to get the support or at least confidence of public opinion. It is also necessary to have a strong communication policy with local communities where units under decommissioning are located.

For example, on BRENNILIS site (HWR), the first unit to be fully dismantled in 2015, a local information committee has been set up in order to inform the local population and to get the participation of local decision-makers. This committee is chaired by the prefect of the administrative region and comprises:

- Elected representatives (Mayors, Members of Parliament, County Councillors)
- Local services of Government Agencies (Health, Environment)
- Local associations
- EDF representatives

This committee meets twice a year. Typical agenda includes systematic information about activities in progress on site and specific topics addressing public concerns about environment and economic issues.

Similar local information committees have been set up on the other decommissioning sites. For example, in CREYS-MALVILLE (Fast Breeder Reactor), meetings of this committee were used to inform the elected representatives about the progress of the preliminary decommissioning studies and particularly about the various dismantling scenarios assessed such as: dismantling of the reactor vessel under water or in dry conditions, release of processed Na in the river or conditioning into concrete blocks. These meetings were an excellent opportunity for EDF to give the reasons of its choices, to hear the apprehension of the population through its elected representatives and to respond to its concerns.

MITIGATION OF SOCIAL AND ECONOMIC IMPACT

Mitigation of social and economic impact of decommissioning is another important issue that will help to get the support of the local stakeholders.

To this end, EDF has developed methodologies and tools that provide an active contribution to the economical and social revitalization of the concerned territories, in partnership with local actors, i.e. local administrations, Chambers of Commerce, State administrations and other economic actors. These methodologies and tools are permanently re-visited and adapted to the evolutions of the French and European political and administrative environment, as well as to the territorial development strategies.

In order to devise the intervention strategy over a territory and organize efficiently a global Site Reconversion project, it is necessary to establish as precisely as possible an economic and social diagnosis. Insofar as EDF intends to go into partnership with the local actors and their own development projects, at this stage the first objective is to identify the chief actors involved with the local development and get acquainted with their projects, whether these are already in motion or still at the embryo stage. Furthermore, the description of the territory's strong points and weak ones must be understood and shared by EDF and the local actors (political, administrative, economic and social), so that the development strategies may be established on clear and non-conflictual bases. The time required to establish this diagnosis and get a consensus may be fairly long. However, a diagnosis made too quickly may lead to unrealistic strategic decisions.

Among the important elements of the diagnosis, the dynamism and varied experience of local businessmen are key factors of success, as much as their usual behaviour and willingness to cooperate to

further the development of their business and of the territory. In this regard, the Chambers of Commerce may play a leading role.

Once the global territory development strategy is reasonably formalized and adopted by local actors, it becomes possible to identify a few preferential development projects because of their impact on jobs, speedy implementation and likely success. Even if these project have a medium-term scope (3 to 5 years), their pertinence and effective results must be regularly reviewed (for example, every year) so as to re-assess their initial priorities.

Once the action plans are defined, their implementation will fall under the responsibility of the different sub-projects and their results will be monitored by the Strategic Steering Committee. If necessary, corrective actions may be taken or initial objectives redefined.

THE SUPERPHENIX RECONVERSION (1997-2003) AS AN ILLUSTRATION:

The definitive shutdown of the Superphenix Fast Breeder Reactor was decided in June 1997 by the French Government. At that time, around 1000 workers were employed on site (EDF and sub-contractors). As for the EDF personnel concerned, after some appropriate training, they were relocated to other units involved with power generation, transmission or distribution. Today, around 250 people still work on site, within the frame of the plant's decommissioning activities.

In order to mitigate the social and economic impact of the early closure of the site, the State and EDF set up a backing organization to assist those people that had lost their jobs and help the local economic fabric to create an equivalent number of jobs. An Economic Development Fund was created by the French Government with the participation of EDF with the objective to support development projects involving private companies, associations and local communities.

The eligible projects for private companies were:

- Creation or development of companies leading to job creation,
- Investment leading to job creation,
- Research or technology transfer projects

With regard to the associations, the eligible projects were mainly related to:

- Cultural activities
- Environmental protection
- Local historical heritage

Regarding the local communities, the eligible projects were mainly related to the implementation of infrastructure that would facilitate the setting up of new companies.

The Economic Development Fund was supporting these projects through two means:

- Grants (mainly for local associations and communities)
- Loans with a low interest rate

Close to 90% of the financial backing was provided as unsecured 5-year loans with a low interest rate, to job-making small- and medium-sized firms. These loans are tied to the number of new jobs expected over a 3-year period agreed upon by the firm. Each semester a survey is carried out to check the true number of jobs created. An EDF representative is always available to help these firms review their difficulties and to provide adapted assistance: advisory services on management, marketing, manufacturing process, labour law, etc... The rate of defaulting debtors is lower than the average rate observed in France. As a result, the funds reimbursed within five years following their attribution become once again available for new loans which in turn enable the creation of new additional jobs.

By the end of the first quarter of 2003, over 750 jobs have been created by local small- and medium-sized firms which benefited from the backing organization, to which another 250 jobs are expected, bringing the sum total to over 1000 new jobs by mid-2005. 115 projects have been supported by the Economic Development Fund, 95 involving private companies and 20 local associations or communities. These figures show that the jobs have not been created by the setting up in the region of a few big companies, but by a lot of small and medium businesses.

In this context it is essential to explain to the local administrations that EDF "does not create jobs". These jobs are created by the local firms, and in this instance the EDF action may be considered as a project booster. Without EDF, these job-making projects would have taken longer to get off the ground, and some of them would probably never have.

What's more, it seems that EDF's expertise toward detecting and backing business projects is now well assimilated by local actors, which should help perpetuate the level of development reached today.

CONCLUSION

In order to ensure as many people as possible within the community understand the impact and implications of closure and decommissioning EDF has developed successful communications initiatives during the last few years. Public acceptance of technical solutions proposed by the company for the final dismantling of its first generation of reactors will constitute a pre-requisite for the erection of new nuclear power plants in France.

EDF involvement in the mitigation of the social and economic impact of decommissioning, its role as a project booster, will also contribute to the recognition of EDF by all the stakeholders as a responsible industrialist that is considering all the aspects of decommissioning and not only the technical one.