



SUSTAINABLE DEVELOPMENT WORKSITES

As part of its own program of major projects, EDF contributes to the programs for major works launched by government agencies. The issue is to coordinate the actions among various stakeholders (industrial, national and public authorities) to build major works while limiting the social and economic impact on surrounding communities. This approach aims to maximize the positive results for the communities where the construction has been undertaken. The approach is being applied at the construction site of the Flamanville 3 nuclear EPR reactor. It has also inspired the measures taken at the Nam Theun dam site in Laos.

CONSTRUCTION of the flamanville EPR

PROTECTING THE ENVIRONMENT

In December 2007, the first concrete was poured. The total volume of concrete used will reach 500,000 m³. As far as possible, the materials (sand, cement, gravel) will come from rock extracted from the worksite itself or from nearby quarries. This helps to develop the local economy and the region's employment, while greatly reducing truck traffic.

BOOSTING BUSINESS AND JOBS IN THE REGION

As part of its contracts with major subcontractors, EDF included a clause asking them to contribute to a plan for local job creation and placement and to identify which of their activities could be carried out locally with as much local manpower as possible. The Cherbourg Chamber of Commerce and professional federations, working with EDF, mobilized local companies, informing them of the principal contractors to enable them to place themselves for subcontracting contracts.

A website was created with the Cherbourg Chamber of Commerce where the region's companies can find the list, schedule and description of calls to bid, as well as the names of the market holders. The latter are provided with a list of local companies interested in subcontracting. A total of 238 companies are currently listed. A "job bus" circulated among the sixteen communes of the Manche department in 2006. It collected close to 1,800 applications. Job interviews were held in early 2007 and 111 people were hired. Another one hundred were recruited to participate in a training program.

In January 2008, an ANPE employment agency was inaugurated next to the EPR worksite in the presence of local officials and businessmen. The agency, co-financed by EDF, is part of a human resources employment and training program implemented at the EPR worksite in the summer of 2007.



MÉDIATHÈQUE EDF - PHILIPPE ÉRANIAN

ATTENTIVE TO WORKER CONDITIONS

During the summer of 2007, a former campground was renovated and refitted to receive part of the personnel working at the Flamanville 3 construction site.



A grouping of companies, Quille/DTP/Bouygues, took charge of the renovation, installation and management of cabins for single employees. These lightweight structures will be dismantled in 2012, once the construction of Flamanville 3 is complete.

FOSTERING QUALITY RELATIONSHIPS WITH LOCAL AUTHORITIES

Every quarter, EDF communicates to all worksite stakeholders, national and local authorities, an operating report on the work's progress, what remains to be done, economic impact and the number of employees.

700
outside workers,
of which 41%
were locals

€17 million
attributed in worksite
contracts, of which
76% went to local
companies

FOCUS ON

"With the environment ever present in our minds, we re-used a major part of the 700,000 m³ of rock extracted from the ground. After grinding it on site and transforming it into gravel, we were able to mix it with sand and cement in concrete plants located at the site. This enabled us to avoid circulating 660 trucks at 25 tonnes each."

Philippe Texiera, responsible for the preparation of the concrete for EDF at Flamanville.

CONSTRUCTION of the Nam Theun 2 dam, Laos

MÉDIATHÈQUE EDF – THIERRY RENAVAND



73%
Overall construction
progress achieved
in 2007 (as planned)

A COMMITMENT IN TERMS OF MEANS DEPLOYED AND RESULTS ACHIEVED

The Nam Theun 2 hydroelectric dam (1,070 MW) provides Laos with a powerful means to support its development and will contribute to providing energy to Thailand, the principal beneficiary of the electricity produced. The powerhouse will also supply 300 GWh/year to Électricité du Laos. EDF is the dam's builder and the main shareholder (35%) of Nam Theun 2 Power Company (NTPC), the owner and future operator of the plant. Since the worksite began in 2005, EDF has made environmental and social commitments involving significant

obligations in terms of means deployed and results achieved. These primarily concern the protection of the environment of the catchment area, the enhancement of the quality of life of relocated populations and the economic and social development of 200 villages downstream from the project.

IMPROVING QUALITY OF LIFE FOR RELOCATED POPULATIONS

In the area comprising the future reservoir, 1,250 families (6,200 people) from 17 villages are being relocated to villages that, according to their wishes, are being built as close as possible to their former villages. Their living conditions have been improved as they have gained access to electricity, water, roads that remain open in all seasons and nearby health services. The infrastructures of public hospitals in the provinces of Kammouane and Bolikamsai have also been improved. The health of the population involved is being monitored through programs integrating epidemiological studies, prevention of malnutrition and STDs (notably AIDS), and bolstering public health services. The primary results are convincing and acknowledged.

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Assessments of health of relocated villagers and vectors of disease (insects and gastropods) are taking place before filling the reservoir in accordance with the cooperation agreement signed by EDF and its foundation with the Laos government and the Pasteur Institute in Paris. At the end of 2007, these assessments concerned over 2,000 villagers and 15 villages. After the reservoir has been flooded, the population will be monitored as part of a study on the reservoir's impact on health. The study will also monitor the vectors.



RURAL DEVELOPMENT PROGRAMS

NTPC is committed to doubling the quality of life of the relocated populations in just five years and is deploying rural development programs to boost and diversify income with new practices in growing crops, animal husbandry and fishing. NTPC is supporting the forest village association VFA, created to replant and protect the forest and to promote diverse activities such as: crafts, saw mills, manufacturing of furniture, production of charcoal, and nurseries for orchids, bamboo and medicinal plants.

DEVELOPMENT PROGRAM FOR DOWNSTREAM AREAS

The hydro works and their operation will have an environmental impact (fish populations, riverside crops) downstream from the power house in an area divided by a 27 km (17 mi.) channel leading to Xe Ban Fai, a tributary of the Mekong. EDF is building a control dam to limit changes to flow due to variation in electricity generation. An eight-year program has also been undertaken to assist populations in more than 200 villages to adapt to their new environment and enhance their quality of life.

FOREST AND BIODIVERSITY CONSERVATION IN THE CATCHMENT AREA

The 4,000 km² catchment area (1,500 sq. mi.) contains a natural reserve of international interest because of its unique wealth of plant and animal life. NTPC has contributed to the foundation and operations of the WMMPA¹, a provincial authority entrusted with protecting biodiversity in the park, in association with local villagers. NTPC has devoted \$1 million

per year for 30 years and is providing technical assistance. This commitment was a major motivation for financial backers such as the World Bank, the Asian Development Bank, and the French Development Agency.

AN OPPORTUNITY FOR DEVELOPMENT

The construction site is a major driver for employment with 5,000 to 8,000 workers, of which more than 80% are Laotian, working under safety conditions and benefiting from training that will be an asset on future worksites. More broadly, the project is a source of development for the entire country. As a shareholder (25%), the Laos government will benefit from dividends and royalties for 25 years, as the concession grantor. The Laos government has committed to using this revenue of \$2 billion during the period of operations, for social and economic development programs. After 25 years of operations, the project will be transferred in full to the Laos government, thus generating export income for several decades to come.

A HIGHLY CONTROLLED CONSTRUCTION PROJECT

In addition to internal controls by NTPC and the Laos government, the project is being closely monitored by outside organizations: a panel of internationally renowned, independent experts, the World Bank, and NGOs that conduct detailed, on the spot verifications of effective implementation of the ethical, environmental and social commitments of the contracting parties.

1. Watershed Management and Protection Authority.

13%
of the total cost
of the project is
dedicated to
assisting the region

10
villages out
of 17 relocated
at end 2007

770 families

settled in their new villages in
2007 and 480 in early 2008

350 people,

of which 16 NGOs, were received
in June 2007 in Thakek for the
project's annual two-day
stakeholder forum which included
visits of the sites

Waste management

Built on the site in 2005 according
to European standards, Laos' first
waste treatment facility is
processing non-hazardous
construction waste. Awareness was
raised among construction workers
on waste management.

FOCUS ON

Unexploded ordnances, the remains of massive bombarding between 1964 and 1973, represent a very real hazard. A systematic program of detection and removal is being carried out at all construction sites and in agricultural and village areas, covering a total of 6,500 hectares (25 sq. mi.). NTPC is contributing \$16 million. NTPC is also organizing sessions to raise awareness in populations and schoolchildren of the dangers of these explosive war remains.

