

## **PUBLIC LIVES**

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Randy David

### **Risk and danger in nuclear power**

Our sensitivity to risk is not constant. It is always shaped by events happening around us. Twenty-five years ago, in November 1985, we were ready to fire the first nuclear power plant in the Philippines. A fateful last minute check demanded by international inspectors showed a few minor deficiencies in the provisions for an emergency, significantly delaying the operation of the plant. Three months later, EDSA people power happened.

The change in government led to a call to review the whole Bataan Nuclear Power Plant (BNPP) project, which somehow had become the emblem of corruption under Marcos. Then, the Chernobyl nuclear disaster happened on April 26, 1986. The Chernobyl nuclear plant had been in operation for barely two years. That accident sealed the fate of the brand-new Philippine nuclear plant. If the technologically-advanced Soviet Union could not effectively handle the risk of a nuclear disaster, how could we, a developing country, possibly think we could do better?

But, what difference a quarter of a century makes. The mothballing of the BNPP left a big hole in the country's energy development program. The gap made itself manifest in the most dramatic way when, towards the end of President Cory's term, the country was hit by long hours of power interruption. With the return of political stability, the demand for energy rose, which the country's obsolete power system could not meet. Worse, old plants were breaking down or were being withdrawn for maintenance and repair. The Ramos government responded to the crippling crisis by inviting private companies to quickly bring in the most expensive way to generate power – power barges that ran on fuel oil. Meanwhile, the country continued to pay for the huge debts incurred in the construction of an expensive nuclear power plant that it had opted not to use.

The nuclear power industry suffered a great setback because of Chernobyl. But the rising cost of fossil fuel, coupled with the growing alarm over the rapid depletion of non-renewable resources, pollution, and global warming, compelled a reevaluation of the risks associated with nuclear power. Riding on the claim that it is the cleanest and most efficient way to produce power, the nuclear industry eventually overcame the stigma of past nuclear accidents. The industry responded to nuclear risk by coming up with more elaborate and sophisticated systems for averting or reducing loss in the event of accidents.

Japan, a big user and producer of nuclear plants, became a leader in the industry – an amazing achievement for a nation that had been traumatized by the destructive application of nuclear power in wartime. The only critical nuclear radiation event to take place in Japan – before the March 11 crisis at the Fukushima power plant – was the Tokaimura accident of September 30, 1999. It took place not even in a power plant but in a small facility where enriched uranium rods were being prepared for use in an experimental reactor. Three workers without proper qualification and training were made to handle a phase in the preparation – a serious breach of safety principles. Two of them later died from radiation exposure, while many other workers were hospitalized. That was the extent of the loss. Residents in the nearby communities were asked to remain indoors, but the warnings were lifted after one day.

The unresolved nuclear crisis at Fukushima I Nuclear Power Plant is vastly different. An order to evacuate residents within a 20-mile radius has been issued. Four reactors out of six have been badly affected by the March 11 earthquake and tsunami. The possibility of a serious damage to the nuclear reactor core has not been discounted. Not even the admirable restraint with which the Japanese authorities are responding to the crisis could conceal the gravity of the situation they face. The Japan Atomic Energy Agency has reported the situation as a Level 4 accident, i.e. as having local consequences. But some foreign nuclear safety experts think it should be rated at 5 or 6. Chernobyl was a level 7 event on the International Nuclear Event Scale.

It is almost certain that this is going to be the beginning of yet another low point for the global nuclear industry. The Fukushima events only prove that there are contingencies for which the most advanced safety systems in place cannot adequately provide the necessary response. But that is the nature of risk; its opposite is not absolute security. The Japanese, known for their meticulousness, took the risk to build nuclear plants on land that they knew was subject to the dangers of devastating earthquakes. Having marked and calculated the risks, they could ignore the dangers. In contrast, we Filipinos saw only the dangers and thus were generally dismissive of the advantages that nuclear power could bring.

Risk-taking is a feature of modern societies. Traditional societies, in contrast, tend to be too intimidated by life's many dangers – i.e. to losses due to external forces -- as to be inclined to forgo many opportunities. In our case, this conservative attitude seemed to be changing, albeit slowly. But, after Fukushima, one doubts very much if Filipinos would be willing to even listen to former Representative Mark Cojuangco passionately argue the case for the activation of the mothballed Bataan Nuclear Power Plant. Suddenly, like 25 years ago, it is the wrong time.

[\*public.lives@gmail.com\*](mailto:public.lives@gmail.com)