Nuclear Power is a Very Good Solution for the Climate

Should France Do Without It for Fear of an Accident?

Nuclear accidents often appear to the public as equally probable in all reactors, whatever the model, the host country or the operator. Only the terms "nuclear accident" seem to be retained, with no other consideration, as a sort of fatality. However, fortunately this vision does not correspond to reality: the nuclear reactor accidents that have occurred worldwide to date are deeply related to human behavior, at all stages whether it be their design, their construction, their operation, their monitoring by the safety authorities, or the global governance of the industry in the host country.

Indeed, the root causes of the Three Mile Island accident in 1979 in the United Sates are human errors. Those of the 1986 Chernobyl accident in Ukraine and of the 2011 Fukushima accident in Japan are irresponsible major human failings at different stages and different responsibility levels in violation of the basic nuclear safety rules. In Fukushima, the tsunami was only the trigger, not the root cause.

Through man's failures and those of the organizations he has set up, man is the problem in all three cases. But he is also the solution if he adopts and implements rigorous organizations to govern this industry, designs and improves his reactors according to the best requirements and knowledge resulting from experience feedback, puts safety at the top of everyone's permanent concerns at all levels of responsibility during reactor operation, trains his operators individually and collectively to reduce the risks of possible errors, and puts in place the material and human resources necessary to be prepared for the worst situations.

With these prerequisites, the residual risk of an accident can be made extremely small and its consequences very limited. With these conditions, it is possible to contemplate the use of nuclear energy, which has the enormous advantages of: producing very low-carbon electricity, an essential factor in reducing climate change; providing a high degree of geopolitical independence; adapting production to demand; and finally, being economically competitive, far removed from the current extravagant costs of electricity produced with gas.

France has been using this energy for more than half a century, with a cumulative experience of more than 2,100 reactor-years of operation with its current reactors, without their having caused a single casualty related to the "nuclear" component. For France to decide to deprive itself of nuclear power in the future by placing itself in the dependence of wind and solar productions subject to the whims of the weather would be a step backwards, all the more penalizing since these sources will be unable to provide enough electricity to preserve the country's developed country status, apart from covering the territory with a profusion of wind turbines that would rapidly become socially unacceptable.

In our non-ideal real world, the citizens can thus choose to dispense with nuclear power and suffer shortages of limited and expensive electricity that will deeply degrade their standard of living, or to continue to accept the infinitesimal residual risk associated to nuclear power and enjoy electricity that is both low-carbon, which is essential to effectively fight climate change, and reasonably abundant and inexpensive to keep a developed-country lifestyle.

This news brief relies on an in-depth analysis of the three above mentioned accidents. The full text of Georges Sapy is available (in English) by following this link : **Should We Do Without Nuclear Power for Fear of an Accident?**