

Perspective on Safety in Germany's Nuclear Phase-out Policy

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1. Introduction

There are three major driving factors behind the German nuclear phase-out movement. For the construction of the nuclear facilities, local residents were actively engaged in civil contention such as civil petitions on the government's exercise of discretion regarding licensing process. Scholar's involvement in the interpretation of whether the acceptance of residual risk satisfy the fundamental rights of the Basic Law gave the logical basis of influence. Organized civil society movements have led to the recognition of energy conservation and energy conversion. In Germany, therefore, it is necessary to look at how the struggle was initiated from safety perspective, how society has accepted it, what kind of political agreement has been reached, and how it has been implemented through the legal system. There can be various perspectives, but two issues are to be presented in this paper.

2. Pre-cautions against possible damage in accordance with the state of art in science and technology

Article 7 (Authorization of Facilities) Section 2 of the German Atomic Energy Act requires that precautionary measures be taken against the potential damage caused by the installation and operation of facilities based on the state of art in science and technology. These requirements are to ensure that nuclear safety is maintained at a high international level and that safety enhancement is not interrupted.

The Constitutional Court of Germany in 1978 ruled how to implement the concept of uncertainty of the latest science and technology in administrative discretion. In the licensing process for fast breeder demonstration, which was supposed to be built in the Kalkar area, a local resident filed a complaint that the permit had to be canceled because the state (Laender) did not proceed with the latest science and technology procedures in the licensing process. In the process of judging this by a local court, the local court determined that the provision lacked the specificity of delegation. Therefore, the court asked the Constitutional Court to judge whether this provision was in conformity with the principle of clarity.

The Constitutional Court first established the so-called parliamentary reservation principle that the important decisions that have a wide impact on the national social community, such as the installation of nuclear power plants, are the sole part of the parliament,

i.e., the legislature. In other words, it was an important decision on the basic rights of the people that Congress allowed the use of peaceful purposes through the legislation of the Atomic Energy Act

Second, the concept of uncertainty exists at all times, and if the legislator decides on its own, it is judged as a matter of whether it is determined in substance. This provision is not in violation of the principle of clarity. In other words, the degree of specificity required depends on the nature of the regulated entity and the intensity of the regulatory regime, rather than fixing the safety standards of the nuclear facilities to the law. To keep responding quickly to the progress of science and technology, the concept of dynamic protection as a licensing requirement for a nuclear facility is qualified as being constitutional.

Thirdly, the Constitutional Court recognized the constitutional right to minimize the risk through this decision, but did not recognize the complete elimination of nuclear risk as a state obligation. However, the Administrative government has an obligation to do their best to identify and evaluate factors related to residual risk. In other words, the decision on the type and size of acceptable or unacceptable risks should be based on the latest science and technology. Therefore it is desirable for administrative authorities with expertise to do such work of lowering risk as reasonably achievable as possible.

3. Categorical Rejection or Relativizing Assessment of Residual Risk

In 2011, the Ethics Committee, which recommended the second nuclear phase-out policy, decided that the core of the pros and cons of using nuclear power is whether the risk of nuclear power is subject to categorical rejection or relativizing assessment. It was a conflicting view of the public that plays a critical role in deciding the policy.

The position of unconditional rejection is that the residual risk inherent in the Fukushima accident that occurred in Japan where science and technology has advanced highly is not consistent with the gradual improvement of safety due to the characteristics of catastrophic and future burden. In other words, the usual residual risks such as traffic and buildings can be taken in the future through lessons learned from actualized risks, but the ultimate accident at the nuclear power plant does not reasonably support this concept of verification.

The position of the relative assessment is that no matter what kind of energy source there is no zero risk, the degree of risk they have is relatively assessable. Therefore, it is the opinion that certain alternatives should not be excluded from the process of final selection through scientific facts, ethical and mutually agreed valuation standards and fair procedures.

The Ethics Committee has sought first whether there is any part of the views of both sides that are acceptable to each other, rather than supporting one of the positions or drawing conclusions. The relative risk assessment side accepted that it was not reasonable to evaluate only the quantitative multiplication of probability and the consequence when evaluating the risk, and it is not reasonable to regard the low probability high risk and high probability low risk as the same. An unconditional rejection side accepts that if you give up one risk you have to accept other risks and when evaluating the risk it is reasonable to consider the probability of an accident.

Finally, the Committee concluded that it is desirable to have an opportunity to replace nuclear plants with less risky, ecologically, economically and socially acceptable energy sources as soon as possible, without the need for both sides to change their views. First, considering the ethical position of risk, comprehensive approach to cultural, social, and psychological consequences as well as the health effects of the risk should be considered. Rather than using the fixed alternative as a basis for risk acceptance, it is more democratic to provide citizens with opportunities and trials to make alternatives. Second, from the perspective of relative evaluation, the final decision of this relative evaluation should be seen to vary from country to country. Since the present situation of Germany shows that it is possible to improve the availability and energy efficiency of renewable energy, it is reasonable to assume that the nuclear power plant is relatively less dangerous than the nuclear power plant.

4. Discussion and Implications

If looking at the process and logic of the German nuclear power plant phase-out, it is noted that the final decision was made in the form of a law in the Congress. The German Atomic Energy Act was enacted in order to promote the use of nuclear energy, which can be seen as an important decision by the Parliament on the fundamental rights of the people. In other words, even if there is a residual risk due to the use of nuclear energy, it was decided to recite it. As a result, the Social Democratic Party and the Green Party, which formed the coalition government in 2002, revised the purpose of Atomic Energy Act in order to shut down the nuclear power plants at the federal parliament. The German nuclear policy and domestic energy conversion claims are not directly relevant from the point of view of safety regulation, but there is a need to listen to approaches and voices related to nuclear safety and safety

regulations required in the process. A careful review will be required to secure, maintain, and improve nuclear safety regulations regardless of energy policy.

REFERENCE

[1] KINS, Nuclear Safety Issue Briefing 2017-5, Historical Process and Logic of German Nuclear Phase-out Policy (2017.6)