

Analysis of Public Participation and Deliberation in the Process of Establishing and Implementing Nuclear Safety Policies

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1. Introduction

Public participation in policies with fairness and deliberation as collateral is gradually expanding the field of use due to increased confidence in the government and positive responses [1]. In particular, the IAEA Safety Standards, etc. emphasize stakeholder participation in policies [2]. The IAEA said transparency, openness and participation in nuclear power are the means to address people's rational concerns. Accordingly, various people's participation in policies has been attempted, and new methods of participating in policies have been attempted in the nuclear field in the process of establishing and implementing nuclear safety policies.

In this study, the process of establishing a public participatory policy that was newly attempted in the process of establishing the 3rd Comprehensive Plan for Nuclear Safety was examined, and the performance was analyzed focusing on the deliberation process.

2. Methods and Results

The Comprehensive Plan for Nuclear Safety is the highest legal plan established every five years by the Nuclear Safety and Security Commission(NSSC) under Article 3 of the Nuclear Safety Act. The comprehensive plan for nuclear safety presents policy directions such as vision, mid- to long-term development directions, and strategic tasks for safety management according to the use of nuclear power. After establishing the 1st comprehensive plan ('12-'16), the NSSC established the 2nd('17-'21) and 3rd('22-'26) comprehensive nuclear safety plan. Until now, the comprehensive plan has been established under the leadership of the government and experts. However, unlike this, the 3rd Comprehensive Plan for Nuclear Safety laid the foundation through active participation of the public.

2.1 Public Participation Policy Formulation Process

2.1.1 Background and Overview

The IAEA, etc. emphasized the increase in public acceptance through policy participation and information provision of stakeholders and the general public.

Accordingly, a Public Participation Group(PPG) representing the people was formed to propose the vision, policy direction, and strategic tasks of the 3rd Comprehensive Plan for Nuclear Safety to the government, and the NSSC established a detailed implementation plan based on this.

Stakeholders participated in the establishment of public-participatory nuclear safety regulation policies in various ways, from the pre-planning stage to the final 3rd comprehensive plan being decided by the NSSC. The following Figure 1 summarizes and shows the model of public participation policy establishment.

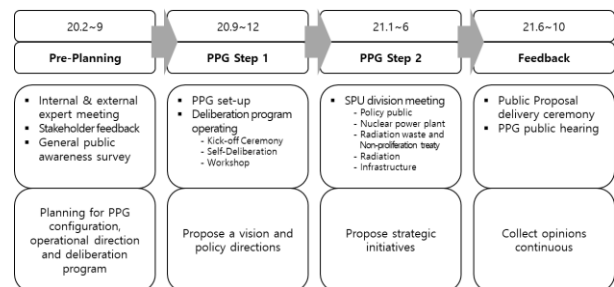


Fig. 1. Nuclear safety public participation operating system (data reconstruction of related reference [3])

2.1.2 Pre-Planning

Prior to the formation and operation of the PPG, a detailed composition and specific operation plan of the PPG were planned through the preliminary planning stage. The composition of the PPG was embodied by collecting opinions more than 20 times, including workshops, expert advisory meetings, working-level meetings, and stakeholder meetings. As a result, as shown in Table 1, the role and composition of the PPG consisting of the Public Participation Unit(PPU), the Strategy Planning Unit(SPU), and the Citizen Reporting Unit(CRU) were completed.

Table I: Role and Composition of the PPG (data reconstruction of related reference [3])

Sortation	Role	Organize	No
PPC	Decide matters related to the operation of PPG	Consist of NSSC, its TSOs, and experts in multiple	12

			disciplines	
P P G	P P U	Propose a vision and set of policy directions through discussion and debate	General Public (Applications and Random Selection)	138
	S P U	Propose strategic initiatives through deliberation	Community members, stakeholders, and experts in multiple disciplines	50
	C R U	Observe the activities of PPG(SNS etc.)	General Public (Applications)	30
PTSG		Compile training material, make presentation to discuss, and answer questions	Consist of NSSC, its TSOs, and experts	31
SSU		Comprehensively manage to ensure smooth operation of PPG	KoFONS	5
Total				266

* PPC: Public Participation Committee
PTSG: Policy Technical Support Group
SSU: Support Services Unit

2.1.3 Participation and Deliberation

The process of participating in the establishment of the 3rd Comprehensive Plan for Nuclear Safety created by the PPG was carried out in a total of two stages. The first stage is when the PPU participates in self-consultations, launching ceremonies, and workshops to draw a vision for nuclear safety and present policy directions through deliberation programs. At the launching ceremony, after the expert's presentation, the data of self-sufficiency were distributed, and in-depth deliberation was conducted through a workshop after self-sufficiency. Throughout the entire process, the PTSG, composed of experts in each field, joined forces to support the deliberation process of the PPU through Q&A. The second stage is the process in which the strategic planning team prepares strategic tasks for the comprehensive plan based on the vision and policy direction derived in the first stage. For in-depth discussions, a division was organized and operated based on the national proposal, and for the continuity of deliberation, 10 applicants from the PPU were selected and participated in the subcommittee meeting together. The proposal containing the vision, policy direction, and strategic tasks of the 3rd Comprehensive Plan for Nuclear Safety prepared through the 2nd stage was delivered to the NSSC after review and confirmation by the PPC.

2.3 Evaluate Performance from Deliberate Perspective

The process of establishing a comprehensive pane for nuclear safety using the PPG follows the basic structure of a public opinion survey developed by Fishkin [4] in that it measures public thoughts through sufficient

information and intensive discussions. However, the detailed operation method and process were changed according to the characteristics of the agenda of the establishment of the 3rd Comprehensive Pland for Nuclear Safety. The Fishkin-style deliberation poll focused on changes in public opinion before and after deliberation on the agenda, while the activities of the PPG focused on learning through the step-by-step deliberation process and merging into one opinion. By evaluating the implementation of the core tasks of public debate, the process of public debate can be qualitatively evaluated [5]. In this study, the activities of the PPG were evaluated according to the following three criteria. For the evaluation, the original data of the survey in the reference were used and reorganized [3].

2.2.1 Whether sufficient information sharing and participants' learning have been achieved

This was judged by whether sufficient information was provided and the evaluation of the provided information. Before the composition of the deliberation data collection, the main interests and key contents of the data collection were identified and included in the data collection through a universal awareness survey of 1,019 ordinary citizens. More than 60 types, including launching ceremony and workshop presentation data, question and answer data, video data, terminology explanation data, and booklets, were provided online and offline. In addition, the launching ceremony and workshop were held at a two-week time interval to conduct self-consultation for two weeks on the data provided by the launching ceremony. In addition, after the same division and discussion, the workshop was conducted in the form of discussions between the division representatives in the center to induce sufficient information sharing among the participants.

When asked how helpful the data provided in the survey conducted after the workshop was during the deliberation process, 81.8% of all participants said it was helpful. In the method of providing information, Q&A with experts was evaluated as the most helpful at 80.2%. Surprisingly, the provision of online information through the website was evaluated low at 58.7%, so direct communication is thought to have been much more helpful.

2.2.2 Is fairness guaranteed in the deliberation

The evaluation of whether fair speaking opportunities were guaranteed during the deliberation process was judged by analyzing the operation of the deliberation program and the discussion process. Considering gender, age, nuclear attitude, and selection process, about 12 people were organized into one division, and a total of 10 divisions were operated to conduct discussions. For each division, there was one facilitator and one step to

Table II: Summary of Assessments from a Deliberate Perspective (data reconstruction of related reference [3])
(N=121, Unit: %)

Criteria	Contents	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	No Answer
Information provision and Learning	The deliberation was helpful in the overall public debate process.	38.8	43.0	13.2	5.0	0.0	0.0
	The provision of deliberation archives was helpful.	33.1	43.0	20.7	3.3	0.0	0.0
	The posting on the website was helpful	21.5	37.2	28.1	11.6	0.8	0.8
	The expert questions and answers was helpful	38.	41.3	14.9	3.3	1.7	0.0
Fairness	I've said enough of what I wanted to say in the minute-to-minute discussion.	38.0	48.8	10.7	1.7	0.8	0.0
	I listened well to others in the minute-to-minute discussion.	53.7	45.5	0.0	0.0	0.8	0.0
	There was a good exchange of views in my office.	57.9	37.2	4.1	0.0	0.8	0.0
	In my office, the discussion proceeded fair.	69.4	24.8	3.3	0.8	0.8	0.8
	The division members I belong to discussed in a mutually respectful manner.	73.6	24.0	2.5	0.0	0.0	0.0
Reflection	Interest in nuclear safety issues has increased since the workshop.	68.6	27.3	2.5	1.7	0.0	0.0
	Knowledge of nuclear safety issues has increased since the workshop.	52.9	39.7	6.6	0.8	0.0	0.0

maintain neutrality, and a division discussion was operated. In the survey on the discussion process conducted after the workshop, most of the participants evaluated that it was a satisfactory discussion process.

2.2.3 Has a reflective deliberation been made

The effect of reflective deliberation can be evaluated as a shift in participant's preferences. The degree of preference conversion of participants was evaluated according to a questionnaire asking the degree of interest in nuclear safety issues and the degree of knowledge increase after the workshop. After participating in the workshop, 95.9% said interest in nuclear safety issues increased, and 92.6% said knowledge of nuclear safety increased through the deliberation process.

3. Conclusions

Through this study, the process of establishing a comprehensive nuclear safety plan using the PPG was examined, and the results were analyzed from the perspective of deliberation. This study was conducted for the purpose of data analysis to prepare plans for continuous expansion and utilization of public participation-type policies in the future.

The contents of the nuclear safety public participation white paper containing the activities of the PPG were analyzed and reorganized, and the results of public debate were evaluated based on information provision, learning, fairness, and reflection from the perspective of deliberation. In this study, it was evaluated from the perspective of deliberation, but in addition to deliberation, planning and participation items are also presented in the analysis frame of public debate [5]. As much as it is, it seems that follow-up research is needed.

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