

Analysis on Effects of Visiting Nuclear Power Plant

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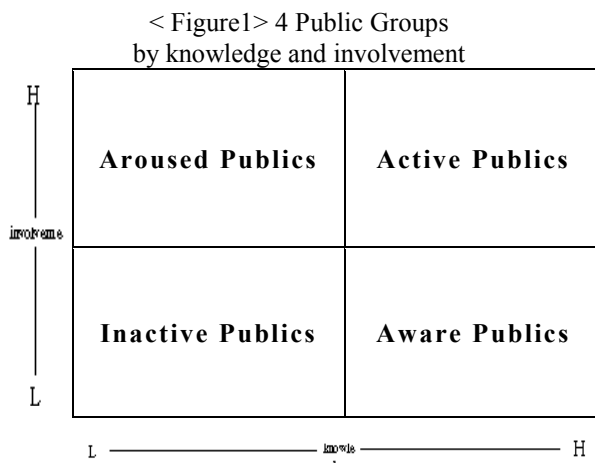
1. Introduction

Although the publicity activities of nuclear energy has been actively held in our country, considering the necessity of the quantitative evaluation of outcome on this has led to the attempt of this study. There is a need for analysis on the change of understanding before and after visiting nuclear power plant (hereinafter, referred to as NPP). There can be a difference in the increase of understanding on nuclear energy after visiting NPP, classified by the public groups.

2. Research Materials and Methods

A. Survey on NPP Visitors

1,372 visitors who visited during January to August 2007 among attendants of NPP visit conducted by Korea Nuclear Energy Foundation every year have been questioned. Visitors, considered that there can be a difference between them in understanding nuclear energy, have been classified into 4 public groups as in <Figure1> according to the knowledge and involvement on nuclear energy : the local people around NPP with low knowledge and high involvement of nuclear energy, into Aroused Publics, environmental groups with high knowledge and high involvement of nuclear energy, into Active Publics, the general public with low knowledge and low involvement of nuclear energy, into Inactive Publics, and academic circles, the press and political circles with high knowledge and low involvement, into Aware Publics.



Source: Hallahan, K, 2001

B. Research Methods

The surveyed contents are composed of 6 items which make it possible to measure the understanding of nuclear energy: the interest level in nuclear energy, the positive image level on nuclear energy, the understanding level of safety on NPP, the trust level in nuclear energy workers, the supporting level in using nuclear energy and the extended opinion level on the usable sphere of nuclear energy. In order to identify the change volume of understanding according to the public groups respectively, firstly factor and reliability analysis have been performed initially to grasp the validity and reliability on the understanding indexes of nuclear energy, a barometer of this thesis. Second, to grasp the difference of nuclear energy understanding according to the public groups, the crossing analysis has been applied to the response proportion and ANOVA has been applied to the average of difference. When there is a meaningful difference in ANOVA, what groups show the difference in the change of understanding through Duncan's test has been grasped. Third, to grasp the significance on the change level of nuclear energy understanding before and after visiting NPP according to each group, t-test has been done. Meanwhile, all variable data has been converted to Z score normalizing the barometer, to remove the problems created according to the difference among variables. SPSS(15 version) Package has been utilized as the basically statistical method.

3. Research Result

As the nuclear energy understanding in 4 public averages of visiting NPP has shown the increase of 0.28 to the average of 4.24 from the previous average 3.96, meaningful findings have turned up statistically. And as each of 4 public groups has shown the difference of nuclear energy understanding and increased, meaningful findings have been statistically signified.

4. Conclusion

Analyzing the effect in promoting the nuclear energy understanding through visiting NPP has shown that each public group has understood NPP better than before, after visiting NPP, and at the result of classifying participants according to the characteristics, recognizing public from experts, academic circles and the

government appear most highly (0.35), and the number of times of visiting NPP for them needs to be increased. The local people nearby NPP show the change of nuclear energy understanding by the least value (0.20) and the effectiveness from them seems to be little. But the local people of NPP seem to stand the highest in understanding. In addition to these, meaningful findings according to participants' characters have been drawn.

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* This paper is excerpted partly from "An Analysis On Changes In Korean Social Acceptance Before And After Visiting Nuclear Energy Facilities", which was submitted by the author for the master's degree in economics at Graduate School of Energy & Environment, Seoul National University of Technology in 2007.