

The result of environmental conflicts of solar panels on the ground

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1. INTRODUCTION

The Feed-in Tariff scheme for renewable energy (RE) was introduced in Japan in 2012. It helped developers to collect their investments easily, so solar power plants spread rapidly. However, some solar panels destroyed forest, ecosystem, landscape, or living environments. Thus, many opposition movements have been launched since 2012 all around Japan (Yamashita, 2016). In this thesis, I call these movements as “environmental conflicts”. In the previous research on the environmental conflicts of RE, many researchers have treated prevention, occurrence sources, and how to solve after damage happened. Yet, they haven’t focused on countermeasures by developers before environmental damage happened in the conflicts. It is important to for developers to reduce expected effects for the environment before generating electricity from the perspective of precautionary principle. The objective of my research is to identify what is the factors affecting result of the conflicts (start working / aborting or modification).

2. METHODS

(1) Quantitative analysis

First, I dug for the conflicts information from newspapers and showed how many conflicts there have been and been end. I also called local government to know the details of each conflict. I divided factors into 4 types, physical, social, system, and stakeholders, and set 6 hypotheses. Then, I used Fisher’s exact test to examine association between the results and factors.

(2) Case study

Second, I explored case study so as to support the results of the quantitative analysis, detect qualitative factors, and describe how each factor affect the results. The investigation objects are Fuefuki city and Hokuto city, botj are in Yamanashi prefecture. I did literature research and Internet survey. Then, I visited there for some interviews with the stakeholders.

3. RESULTS AND DISCUSSION

I found 84 conflicts from newspapers, and 34 conflicts had already ended. In addition, over 75% of the developers modified their plans, including aborting the project. The results of the qualitative test haven’t supported the association. From case study, it is implied that factors of stakeholders associated to the results. In addition, we found that conflicts experience and information haven’t shared among local governments at least in some prefectures. It is hoped that someone will examine more appropriate quantitative tests after many conflicts end, and comparative study for some conflicts in order to find out factors related to the results of the conflicts more collectly.

CITATION

Noriaki Yamashita (2016) “Research on troubles and corresponding policies in utility-scale solar PV project development in Japan” ISEP research report