

**Topic-Setting Program to Advance Cutting-Edge
Humanities and Social Sciences Research**
(Area Cultivation)

Progress Report
(Summary of Final Report)

**[Constraction of Sustainability Studies through
the devepoment of Community Power]**

Core-Researcher: Makoto Nishikido

Institution: Hosei University

Academic Unit: Faculty of Sustainability Studies

Position: Professor

Research Period: FY2014 – FY2017

1. Basic information of research project

Research Area	Dialogue between narrative theory and empirical analysis
Project Title	Constraction of Sustainability Studies through the devepoment of Community Power
Institution	Hosei University
Core-Researcher (Name, Academic Unit & Position)	Makoto Nishikido, Faculty of Sustainability Studies, Professor
Project Period	FY2014 - FY2017
Appropriations Plan (million ¥)	FY2014 JPY ¥2,500,000-
	FY2015 JPY ¥3,450,000-
	FY2016 JPY ¥3,200,000-
	FY2017 JPY ¥2,250,000-

2. Purpose of research

After the Great East Japan Earthquake and a Fukushima Daiichi nuclear power plant accident, many projects for creating renewable energy plants occurred. We can find out the existence of the social needs of renewable energy in order to change the electric supply structure which depends on the nuclear energy. To accelerate investment in renewable energy, the Democratic Party of Japan (DPJ) introduced a feed-in tariff (FIT) system in 2012, under which renewable electricity producers are paid a fixed tariff above the market rate for the electricity that is fed into the grid.

After the introduction of the feed-in tariff, many big companies in Japan or outside of Japan have entered the renewable energy project. But these projects give little benefit to local areas, and do not contribute the local well-being, so some big renewable energy projects are criticized by local residents and nature conservation groups.

Since humanities and social sciences have described and analyzed the ex post description of the phenomenon, humanities and social sciences could not deal with the community problems which don't clearly exist in community like "social friction". In other words, even if we correspond to tangible problems, we cannot solve the problems about sustainability. Therefore, it is necessary to set up a problem exploratively, without setting up a problem by a given framework. We have to understand an observable fact as nonlinear phenomenon through propositionizing description by qualitative research and verifying by quantitative research. And we also have to build new model which are associated with conversion of academic frames.

The purpose of this research is to consider the directivity of the ideal of the renewable energy which contributes to the area. In other words, in this research, we have planned to build a norm and ethic about the renewable energy business. We have found out the norm and ethics which were based on the field from some qualitative data and some quantitative data. Then we'll carry out the policy proposal about the

renewable energy enterprise which contributes to the area (community power), based on that the norm and ethics. In this research, we'll carry out that the conditions for a renewable energy enterprise to develop endogenously and consider the possibility of the “sustainability studies” concerning the development of the renewable energy which contributes to the area (community power).

3. Outline of research (Including study member)

The purpose of this research project is to analyze the conditions of community power to develop endogenously and consider the possibility of the “sustainability studies”. The contents of our research project are as follows:

- (1) Business operation of the renewable energy enterprise which contributes to the area (community power).
- (2) Social Acceptance of residents for renewable energy business development.
- (3) The market of renewable energy, and the trend of the network between companies of renewable energy.
- (4) Local governance about the guidance/regulation to a renewable energy enterprise.

In order to analysis above topics, we have collected qualitative data and quantitative data and analyzed the actual conditions of community power by international comparison (eg. Germany, Australia, UK). And we have researched the states of community power by each renewable energy (wind power generation, photovoltaics, biomass, cold heat energy, geothermal energy). We have done interdisciplinary research (sociology, economics, business administration, politics, social psychology, public administration) about the endogenous development of renewable energy. This research project has tried to bridge various social sciences, certify the interests and structure of the development of renewable energy, and show concretely the state of the governance for realizing optimal social control, based on environmental ethics, a norm. Then we have challenged the subject “dialog of a normative theory and experience analysis”.

Study Member List

	Name	Affiliation/Position	Research contents
Core Researcher	Makoto Nishikido	Faculty of Sustainability Hosei University, Professor	Chief
Co researcher	Yasushi Maruyama	Graduate School of Environmental Studies, Nagoya University, Professor	Social Practice／Case study (abroad or domestic)

Co researcher	Hidetoshi Yamashita	Graduate school of Economics, Hitotsubashi University, Associate Professor	Local government Case study (abroad)
Co researcher	Itaru Kashiwaya	Faculty of Sociology, Aomori University, Professor	Market of Renewable Energy Case study (domestic)
Co researcher	Memi Motosu	Hydrospheric Atmospheric Research Center, Nagoya University, Assistant Professor	Social Acceptance Case study (abroad)
Co researcher	Shinji Yamamoto	Iwate University Faculty of Agriculture Associate Professor	Biomass Project Case study (domestic)
Co researcher	Kazunori Kado	Department of Sociology, Asahikawa Campus, Hokkaido University of Education, Professor	Cold Heat Energy Project Case study (domestic)
Co researcher	Shota Furuya	Institute for Sustainable Energy Policies Research Division, Researcher	PV Project, Social Practice Case study (abroad)
Co researcher	Yamashita Noriaki	Institute for Sustainable Energy Policies Research Division, Senior Researcher	Environmental Policy Case study (domestic)

4. Research results and outcomes produced

The domain of this research is divided into a community with a renewable energy market, local governance, local community and residents. These three domains and the divisions with which the domains overlapped show seven topics and academic topics.

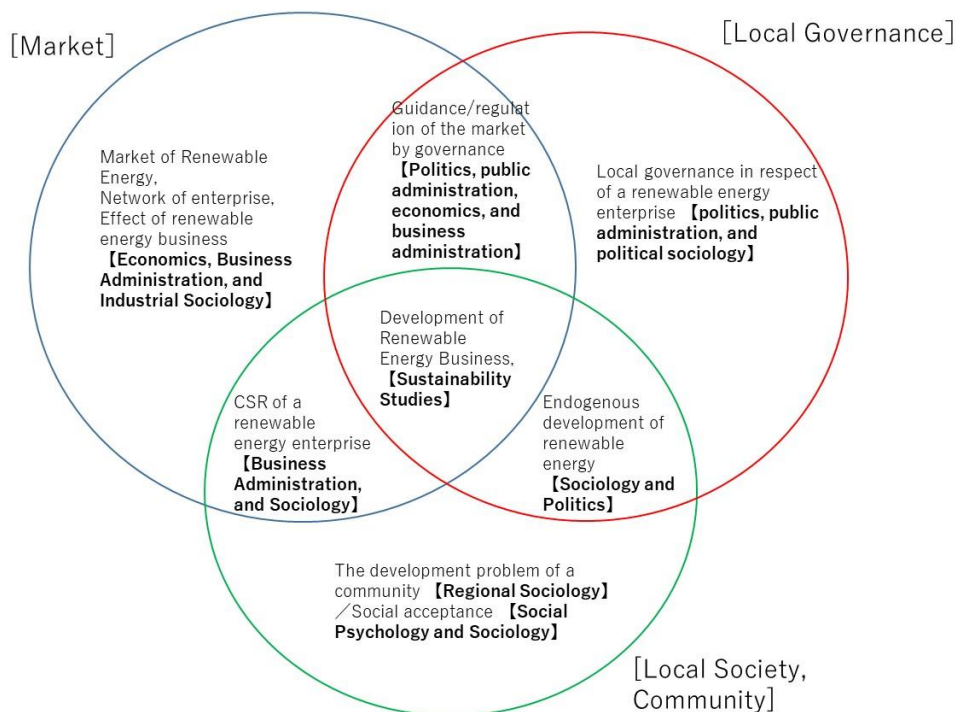
The contents of our research project are as follows:

- The theme of market of renewable energy, network of enterprise, effect of renewable energy business are studied by cooperation of economics, business administration, and industrial sociology.
- Guidance/regulation of the market by governance are researched by cooperation of politics, public administration, economics, and business administration.
- Local governance in respect of a renewable energy enterprise are considered by cooperation of politics, public administration, and political sociology.
- Endogenous development of renewable energy are studied by cooperation of sociology and politics.
- CSR of a renewable energy enterprise are considered by cooperation of business administration, and sociology.
- The development problem of a community are studied by regional sociology. Social

acceptance is analyzed by cooperation of social psychology and sociology.

The above-mentioned consideration showed some conditions of endogenous development of community power. For example, in the case of wind power generators, because the entrepreneurs persist in endogenous development of the area will cause colony type development of renewable energy, it is important for creating community power to create the chance of exchange with a local resident and some derivative profits by renewable energy company which does not locate in the locals. We also indicated that it is significant for community power project that the existence of business entity which performs the maintenance of wind power generation business in local and the local financial institution has participated in the renewable energy project. Moreover, we could show that the condition of community power is to consider the total energy cost in the local and the sustainability of natural resources in the case of biomass and cold heat energy.

Finally, the center of figure shows that the theme of development of renewable energy business are studied by “sustainability studies.” The sustainability studies about renewable energy (community power project) go hand in hand with social practice based on various interdisciplinary research. For example, our research project member created local regulations about community power in Hachijo-cho, which is based on our research projects.



As the result of research project, we wrote 31 academic papers, 10 publications, made 35 presentations at various academic conferences and presented at 38 symposiums. The contents of all outcomes across the area of an existing academic domain.

Our presentations about the practice of community power in Japan were appreciated as good practice by other country. And the research of local governance for renewable energy became joint investigation with Asahi-Shimbun (newspaper) and the outcome of research was reported on the newspaper (Asahi Shimbun, August 14, 2017 etc.). Moreover, the findings of our research projects contribute to various practice which create the community power project in Japan.

The future subjects of research are as follows:

- (1) We need to consider some problems about the relationship between the choice of energy technique and the consensus building for community power. We also have to set up the framework of locality in a global problem framework like a global environmental problem. It is necessary to clarify the methods of (local) governance when the energy technology socializes.
- (2) Although there are much research of the social acceptance and the social-scientific technique of renewable energy, so we have to establish the sustainability studies which include humanities and social science. Especially we have to add social science-centered sustainability studies to an anthropology. Because some indigenous culture obstructs the development of community power even if the installation of renewable energy is very important for the residents. On the other sides, some countries try to create renewable energy plants on the disadvantageous place in which indigenous people reside. Thus, to grasp the indigenous culture is important for developing the community power and the sustainability studies which bridge between humanities and social sciences.