

FUNDING PROGRAM FOR NEXT GENERATION WORLD-LEADING RESEARCHERS

Project Title: Business Management and Green Innovation systems aiming both for reduction of carbon dioxide emissions and for industrial development

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1. Background of research

To achieve 25% reduction of a greenhouse gas from 1990 levels, it is thought to be indispensable to build nine new nuclear power plants as planned. However a serious accident at Fukushima nuclear power plants caused by the East Japan Earthquake made it almost impossible to build a new one. Even operations of the existing plants became difficult. We are now facing a very complex set of problems with no immediate solution, which includes environmental and energy supply problems as well as economic problems contradicting each other. The key to solve this problem, I believe, resides in the expansion of newly established energy and environmental industries and competitiveness of Japanese companies in such industries.

2. Research objectives

By analyzing technologies and markets for the targeted environment- / energy-related industries (including photo voltaic, geothermal energy, coal and gas fired, fuel cell, water treatment, and incinerator), I first identify growth potentials and key competitive factors for these industries. I then clarify problems and issues for Japanese companies, ranging from technology development and business strategy to organizational arrangement. I finally try to make proposals for solving those problems. I also theoretically analyze effects of newly established institutional mechanisms, such as emission trade, on innovative activities and competitiveness of companies.

3. Research characteristics (incl. originality and creativity)

This research has a distinctiveness in investigating interrelationships among environment issues, energy supply issues, industry policy, market competition from a micro viewpoint. I conduct in-depth field research in global settings and dig into actual practices of management and technology development in companies.

4. Anticipated effects and future applications of research

The research is expected to specify the directions of new industries that simultaneously solve environmental and energy problems, and of technology development and business strategy for companies to increase their value-added. It is also expected to enable policy makers to make appropriate policies based on deep understanding of their impact on industries.