

AN ANALYSIS ON THE PROJECT STRUCTURE TO EXPAND RENEWABLE ENERGY -- A CASE STUDY OF THE MANIWA BIOMASS PROJECT IN JAPAN BY CHECKING FROM THE VIEWPOINT OF PPP (PUBLIC PRIVATE PARTNERSHIP) --

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Overview

After the adoption of UN framework convention on climate changes (UNFCCC) in 1992, the expansion of renewable energies has been pursued to a great extent by planning various kinds of regional development projects in Japan. In the past 25 years, we have experienced so many happenings and troubles related to the introduction and expansion of renewable energies through these projects.

In December 2015, the Paris agreement on post Kyoto GHGs reduction was finally approved by many countries including various developing countries. In May 2016, Japanese Government has authorized the new target of GHGs reduction to achieve 26% reduction from the emission level in 2013 up to 2030. In addition, Japan need to intensify GHGs reduction measures, because she already comitted 50% (or 80%) reduction of GHGs in 2050 in the long-run.

Thus, the expansion of renewable energies related to regional development projects will be one of important options to achieve GHGs reductions in Japan. In this paper, we made a case study on the regional development project in Maniwa city, Okayama Pref. of Japan. Because this project has continued during past 24 years with step by step progresses, we can definitely say this project is one of the successful examples in Japan.

Methods

First, we surveyed historical events on the regional development projects in Maniwa city which was focusing local biomass and wood resources. We especially discussed in this study what kinds of biomass projects has been piled up step by step during the past 24 years and also checked how to expand these projects synergistically.

Second, we analyzed on the players' structure of various biomass projects, respectively. We also discussed who was a key player in order to make these projects successful and what kinds of player's relationship were required for these projects, if judging from the view point of PPP (public and private partnerships).

Third, by checking statistical data such as population and finance in Maniwa city, we analyzed the effects brought by the regional developments. Finally, we summarized several conclusions of this paper.

Table 1 Historical events on the Maniwa biomass projects

Time	Event
1993.04	"Maniwa Circle for the 21 st century" (Private organization) was started.
1997.10	A symposium on environmental-friendly town developments was held.
1998	The eco-friendly power generation was started.
2001.03	The industrial cluster plans using woody resources were made.
2002	Wood chip cement and cat litter were commercialized.
2002.11	"Maniwa Circle for the 21 st century got a NPO legal personality.
2003.02	The Maniwa forum was held.
2005	Maniwa city started by the merger of towns and villages, NEDO demonstration project was started.
2006.04	The Maniwa city biomass town plan was announced.
2006.12	Biomass tours Maniwa were started.
2007.10	The next-generation energy park plan was authorized.
2009.04	Maniwa biomass gathering station was constructed.
2009.06	Maniwa project was selected as 100 greatest new energies.
2011	The utilization of domestic credits system was started
2013.03	The guideline for Maniwa city woody biomass energies utilization was made.
2013	The Maniwa biomass industrial forests and city plan was made.
2015.04	The large-scale Maniwa biomass power generation plant was started.

Results

Table 1 shows historical events on the Maniwa biomass projects [1-3]. It should be pointed out that the starting point of this regional development project was “Maniwa Circle for the 21st century” in which local younger people got together. Based on the discussions in this circle, various kinds of development projects such as the eco-friendly power generation, the industrial cluster plan, the commercialization of wood chip cement and cat litter, the biomass town plan and so on has been piled up until now, as shown Table 1.

Table 2 PPP structure of recent Maniwa biomass projects

Project	Public sector	Private sector	Other sector
I. Biomass power generation project	#Maniwa city government	#Meiken Kogyo Co. #Tsuayama integrated wood market Co. #Sanin Maruwa forestry Co. #Maniwa wood city sale Co.	#Maniwa biomass generation project promotion joint council #Maniwa forest owner's cooperative #Okayama forest cooperative association #Maniwa wood industry cooperative
II. Biomass refinery project	#Maniwa city government #Okayama Pref. government	#Maniwa Bioenergy Co. #Maniwa Biochemical Co. #Mori Machinery Co. #FONTEC R&D Co.	#Maniwa biomass refinery project promotion joint council #Maniwa forest owner's cooperative #Maniwa wood industry cooperative #NPO Maniwa circle for the 21st century #Okayama University
III. Agriculture network project	#Maniwa city government	#JA Maniwa #All Maniwa Co. #Roadside station “Kaze no ie” #Roadside station “Daigo no sato”	#Maniwa aguri network association #Maniwa farmer's cooperative #Bihoku farmer's cooperative #Hiruzen dairyman's and farmer's cooperative #Maniwa Highschool

Table 2 shows PPP structure of recent Maniwa biomass projects [1-3]. The players shown by red characters are an key leading one in individual projects. The players shown by blue characters are an organization for linking various players participating to individual projects. The notable characteristics in the players' structure is that the local powerful players are joining to the projects from the public, private and other sectors, respectively. Especially, the role of Mani city government, Meiken Kogyo Co. and Maniwa circle for the 21st century is quite important.

The regional developments in Maniwa city has been continued during the past 24 years by expanding various biomass and agricultural projects step by step. We also analysed the financial data in Maniwa city [4-5]. Accompanied with these developments, the finance situations in Maniwa city has been improved and changed to a healthy state. In addition, the population decreases in Maniwa city has also been mitigated since 2005.

Conclusions

First, though the regional development projects in Japan were often made under the leadership of the central governments, they were not always successful. Based on the successful example in Maniwa city, the participation of local players from the public, private and other sectors and the linkage of these local players would be crucial.

Second, the searches and pursuits of local needs would be a quite important task for the regional developments. In the regional developments in Maniwa city, this role has been charged by NPO “Maniwa circle for the 21st century.” The function for local opinion exchanges would be also crucial.

Third, the participation of powerful local companies would be essential to accomplish the regional development projects. In the case of Maniwa city, this role has been played by Meiken Kogyo Co., one of local leading company in the wood sector. The participation of local strong company from the private sector would be essential.

Fourth, the continuous piling up of various projects step by step over the long period would be required for the successful regional developments. Because of this, the role of local government such as Maniwa city government and the connection between local and central governments would be also a key factor.

References

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