

Prospect of Renewable Energy Policy for Local Governments

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1. INTRODUCTION

After the industrial revolution, various global environmental issues have been brought about due to mass production and consumption with fossil fuel, especially in advanced countries. In particular, global warming and climate change directly relate to energy problems and the attempts to reduce the emission of greenhouse gases are made through international negotiation.

From the viewpoint of not only the reduction of greenhouse gases by the effective use of energy but also the activation of local citizen and the promotion of participants to decision-making of energy policy, renewable energies have a potential, and thus they are planned to introduce all over the world. The difference between the Germany Wind capacity and that of U.K. shows that government's energy policy affect to installation of renewable energies. Although measures to install new energy including some renewable energies are adopted in Japan, the possibility of inhibition for renewable energies, in a certain level, is pointed out due to the economical efficiency of RDF.

As shown in Aachen model in Germany, a successful example that a local government promoted a proprietary measure is widely spread to the other cities and affects the government energy policy, even if the government's energy policy is not sufficient. In this study, prospect of renewable energy policy of local government are discussed.

2. INVESTIGATION OF PREVIOUS CASES

Japanese advanced communities for renewable energies were classified. The examples of the promotion for PV by the scheme made by local government and inhabitant or the little merit case to local citizens are seen. A government promotes renewable energies through top-down approach, and there are many examples concerning the development of the area and citizens participation, and there are some measures for generation power in the community which population is from several thousands to several ten thousand.

Some cities which have several hundred thousand people take measure for renewable energies. Kawagoe city made energy conservation and promotion of renewable energies for inhabitants, Tokyo city buys green electricity, their measures can be applied to other communities.

In foreign countries, some cities which have several hundred thousand people have own energy policy and promote renewable energies with cooperation between government, businesses and citizens.

3. APPLICATION TO KITAKYUSHU CITY

(1) Adopted measures

Cost cutter through energy saving, installation of PV to public site, personal grants of PV, installation of wind turbine and green purchase of electricity were examined.

(2) Effects of the measures

Through 5 % energy saving and the green purchase of electricity, CO₂ emission can be reduced most effectively (1353ton-CO₂). The effect of the reduction of CO₂ emission is as follows; establishment of wind powder generation > grants of PV > PV installing to public site.

4. CONCLUSION

In the case of large scale local governments such as Kitakyushu city, it is found that the promotion of renewable energies can be greatly achieved through not only supply side measures but also measures which create demand.