An Examination on the Risk Reduction Measures under the Current Renewable Portfolio Standard

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Key Words : Renewable energy, Renewable Portfolio Standard (RPS), Investment climate assessment, Business risk

1. BACKGROUND AND RESEARCH OBJECTIVE

"Special Measures Law Concerning the Use of New Energy by Electric Utilities" is a policy which is aimed at furthering the use of new energy imposing an obligation on electricity retailers to use a certain amount of electricity from new energy with tradable green certificates, and categorized as Renewable Portfolio Standard (RPS). This thesis explores an improvement in RPS policy based on the problem consciousness that current system needs to create more favorable investment climate for independent power producers in a feasible way.

The RPS study has high theoretical and practical value. Regarding the theoretical perspective, there is still no clear consensus on the discussion of feed-in tariffs vs. RPS, and there are few studies address the institutional design issues of Japanese RPS system. Moreover, although the investment analysis is highly effective to study the demand-pull policies such as RPS, few studies are conducted from this viewpoint in Japan. As for the practical perspective, improvement in current RPS policy is in the strong need with the awareness that the policy switch to FIT is extremely difficult in the current situation.

Based on the background stated above, this thesis is intended to clarify (1) how current RPS is assessed from investor's perspective and (2) how effective the improvements are, which is derived from the assessment.

2. FINDINGS

(1) Analysis of present state by Risk-Profitability Approach

The investment climate is analyzed using Risk-Profitability Approach developed in Dinica(2006) to the first research question. This method analyzes the investment climate by profitability and risks of renewables power projects assisted by governmental support system. It becomes clear that Japanese investment climate supported by current policy is located area 2 which means minimal investment context with moderate profitability and high risks. This result indicates both of profitability and risks need to be improved, but risk reduction under RPS is required more immediately.

(2) Suggestions for RPS improvement by the risk assessment using questionnaire

The risk assessment is conducted referring to the questionnaire used in Marsh(2007) to answer the second research question. The result identifies (1) it is possible to reduce the bankable contract risk which is the biggest risk factor only by the increase of target amount, (2) the measures such as lengthening of target period, setting of floor price, establishment of transparent TGC market and change the penalty for non-compliance enable additional risk reduction as a whole.

3. CONCLUSION

Since those results indicate the risk reduction measures mentioned above are potentially effective in renewables diffusion, this thesis suggests them as effective measures which improve the investment climate from the risk perspective.

4. REFERENCES

Dinica, Valentina. "Support Systems for the Diffusion of Renewable Energy Technologies--an Investor Perspective." Energy Policy 34, no. 4 (2006): 461-80.

Marsh. "Assessment of Financial Risk Management Instruments for Renewable Energy Projects Unep Working Group1 Study Report." (2007)