

RENEWABLE PORTFOLIO STANDARD IN SOUTH KOREA: A SHORT POLICY REVIEW

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Overview

Although governments intervene in the renewable energy market to support its growth, the information asymmetry problem between the government and renewable energy suppliers can distort policy outcomes. This study examines the information asymmetry problem of renewable energy policies by exploring the policy experiences of South Korea. In 2012, South Korea introduced an RPS (Renewable Portfolio Standard) policy in the electricity market to increase the market share of renewable energy. Prior to that, it had experienced with FIT (Feed-in Tariffs) as well. Therefore, the South Korean case is an interesting study to evaluate the effectiveness of renewable energy policies.

Methods

This paper is a policy-oriented study. Information asymmetry problems in FIT and RPS policies are examined by first illustrating a simple model and then exploring the policy experience of South Korea. The RES-E (electricity from renewable energy sources) market data of South Korea are analyzed to investigate the policy effectiveness.

Results

First, a simple theoretical model shows that FIT and RPS can result in information asymmetry problems and rent-seeking behavior by RES-E producers. Second, the FIT and RPS policy experiences of South Korea confirm that there have indeed been information asymmetry problems.

Conclusions

The government determines FITs on the basis of cost information on each RES-E technology. However, given an information asymmetry problem with RES-E costs and rent-seeking behavior by RES-E producers, the quantity of RES-E and the subsidy budget exceed the government's initial expectations. In fact, excessive budget expenditures for FITs have been common in South Korea and many other countries. In RPS, information asymmetry may seem to no longer be a problem because the government does not need information on RES-E costs. The RPS market mechanism determines how much electricity is produced from each renewable energy source. However, a problem with RPS is that non-marginal technology can earn rent because a standard RPS has one common price. To reduce rents given to non-marginal technologies, "banding" or "set-aside" is needed. The ratio of multipliers in a banding scheme must be proportional to the generation cost of each technology, less the average electricity price. Rent-seeking behaviors are highly probable in deciding banding ratios. The South Korean experience confirms that multipliers in the banding scheme have been key elements in determining winners in the RES-E market. Therefore, the information asymmetry problem is still an issue with RPS. Although market support policies for RES-E are essential to stimulate growth, more elaborate policy designs are required to overcome information asymmetry problems.

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