

Why is South Korea's renewable energy policy failing? A qualitative evaluation



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HIGHLIGHTS

- We identify factors for successful renewable energy deployment policies.
- We construct an evaluation framework based on the established literature.
- We analyze data collected from focused interviews and secondary materials.
- There exists an overall weakness throughout all renewable energy policy phases.
- We recommend some policy prescriptions based on the evaluation results.

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ABSTRACT

This study explores the causes of the South Korean government's failure to successfully deploy its renewable energy policy. Despite the South Korean government's ongoing efforts since 2002 to promote the deployment of renewable energy, the established deployment target has not been met and the share of renewable energy supply in total primary energy supply is poor compared to peer countries with a similar level of economic development. Therefore, we attempt to find the causes of this policy failure using qualitative evaluation methods. Through the analyses, conducted using focused interviews and secondary data, we found that the domination of the fossil fuel and nuclear power industry's interests, inconsistent policy shifts, policy design that lacks sufficient support schemes, poorly coordinated government activities, and unsystemic and untimely monitoring and feedback have led to the failure of renewable energy deployment policies in South Korea. To overcome these problems, we suggest that the South Korean government should set more ambitious policy goals, establish a new independent organization that focuses on energy policy issues, use a varied policy mix, and secure political support from diverse policy actors.

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1. Introduction

1.1. Background

This study aims to evaluate South Korea's renewable energy policy by inspecting what the South Korean government has achieved and what has been deficient in the implementation of the policy. The use of renewable energy has been promoted worldwide to cope with global climate change, environmental degradation, and uncertainty of fossil fuel supply. South Korea, which has grown into the world's thirteenth-largest economy and

eighth-largest energy consumer, is still an energy-dependent country that imports 97% of the total amount of energy needed. Thus, securing a stable energy supply has been a primary national energy policy goal (Hong and Jeong, 2012).

In an effort to cope with the problem of occasional energy shortages and the international pressure to reduce greenhouse gases, the South Korean government has promoted the deployment of renewable energies since the declaration of the first year of renewable energy and the adoption of the feed-in-tariff (FIT) program in 2002 (IEA, 2012; Kim, 2012). In 2008, the South Korean government issued "low carbon, green growth" as a major national policy direction and pursued economic growth by means of developing green technology and deploying clean energy, including renewable energy (Moon, 2010; IEA, 2012: 21–22). As a result, the

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energy production from renewable sources has increased constantly from 1.4% of total primary energy supply (TPES) in 2002 to 2.75% of TPES in 2011 (Korean Statistical Information Service, 2014).

In spite of the increase in total energy production from renewable resources and the investment of 8360 billion Korean won from the government between 2004 and 2011 (KNREC, 2012; MOTIE, 2014), South Korea's renewable energy policies can hardly be considered successful. This view is based on the following reasons. First, the annual renewable energy production and deployment fall short of the yearly goal. According to its First New and Renewable Energy Development and Deployment Basic Plan (2002–2011, hereinafter, Basic Plan), South Korea targeted to provide 3% of TPES from new and renewable energy sources by 2006 (KEMCO, 2002), but the actual achievement was only 2.24% (Korean Statistical Information Service, 2014). The Second Basic Plan (2003–2012) set the target at 5% of TPES by 2011 (MOCIE, 2003), but the achievement again fell short of this goal, supplying only 2.75% of TPES from new and renewable sources (Korean Statistical Information Service, 2014). Recently, the Third Basic Plan (2009–2030) set the new target of gaining 11% of TPES from renewable resources by 2030 (MKE, 2009). However, given the deviation of South Korea's renewable energy policy targets from the actual achievements, shown in Fig. 1, it is uncertain that the government will meet the goals.

Second, when comparing South Korea's renewable energy deployment record with that of other industrialized countries, South Korea's performance is very poor. In 2012, the share of renewable energy contribution to TPES was the lowest among OECD countries: South Korea's new and renewable energy contributed 1.9% of TPES, while the International Energy Agency (IEA) average is 9% (IEA, 2014; Kim, 2012). Fig. 2 shows how South Korea's renewable energy contribution compares to those of other IEA countries.

In short, based on data on policy performance measured against targets and the relative comparison to other industrialized countries, we contend that South Korea's renewable energy policy has been failing. Through a qualitative evaluation, therefore, this study seeks to identify both institutional and non-institutional causes of South Korea's renewable energy policy failure and attempts to provide alternative policy suggestions to overcome the defects of and obstacles to a successful renewable energy policy. Thus, the major research questions are as follows: What are the factors, flaws, or hindrances that have caused South Korea's renewable energy deployment policy to fail? What policy suggestions can be made to overcome the barriers of a successful renewable energy deployment policy?

To answer these questions, this study first reviews the literature presenting the factors or elements of a successful renewable energy policy. We then briefly outline the status of South Korea's renewable energy policies. Based on the review of theoretical discussion and policy practice, we develop an evaluation framework to single out the causes of policy failure of South Korea's renewable energy policy. We explain the data collection methods we use such as the review of documents and archival records, as well as focused interviews. We then present the results of the evaluation. Finally, based on the result, we outline some challenges to be faced and suggest policy alternatives.

1.2. Literature review

Scholars have suggested factors that might contribute to the success of a renewable energy deployment policy, both through analyses on individual countries that have been successful in deploying renewable energies and through cross-national comparisons. While there are some commonalities in the factors explored, there has been no scholarly agreement on a dominant factor that

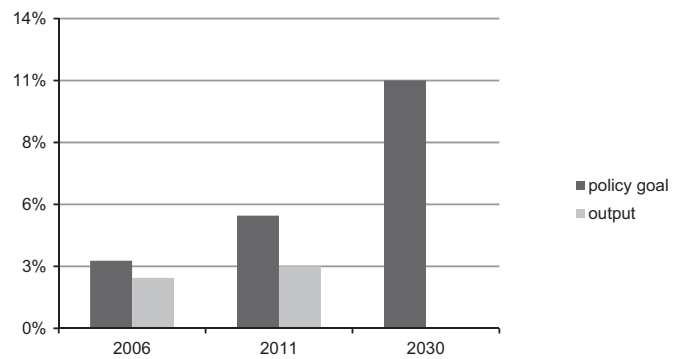


Fig. 1. South Korea's renewable energy supply goals and actual outputs as a percentage of total primary energy supply (TPES). Source: Korean Statistical Information Service (2014).

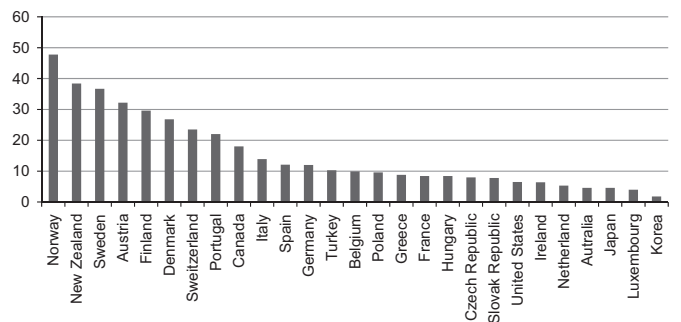


Fig. 2. Renewable energy as a percentage of TPES in IEA member countries, 2012. Units: %, TOE. Source: International Energy Agency (2012).

may determine the success of a nation's renewable energy policy.

Finon (2006) and Carley (2009) emphasize that the policy environment such as the role of political institutions and interest groups need to be examined in the study of the effectiveness of renewable energy policy. Delmas and Montes-Sancho (2011), in their study on U.S. state policies for renewable energy, also argue that the policy environment, which includes political and social factors other than the policy itself, like the presence of environmental group membership and green consumers, causes the success of renewable policies. Similarly, Yi and Feiock (2014) find that political factors, such as the role of regulatory institutions and entrepreneurial politics, influence the deployment of renewable energy. Wisser et al. (2005, 2007) and Wisser (2010), in their analyses of the U.S. experience of renewable portfolio standards policies that focused on policy design and implementation, find that overly aggressive targets, uncertainty of policy duration, inadequate efforts to enforce policies, and too many exemptions led to the failure of renewable energy policies. Komor (2004) also points out that the details of implementation as well as clarifying policy goals and setting goals based on a consensus through a political process are critical for the success of the renewable portfolio standard (RPS) program in Texas, U.S.

The success of Germany's renewable energy policy is attributed to factors of the political environment and policy design. Lipp (2007) argues that political factors such as the presence of the Green Party and the rise of an advocacy coalition that could affect the institutional framework for renewable energy policy were critical for Germany's success. Oshima (2013) points out that policy design factors such as the adoption of a feed-in tariffs (FIT) program, the high level of policy goals, and the principle of priority connection of renewable energy to the grid led to Germany's success.

According to Komor (2004), the Netherlands' success in deploying renewable energy resulted from several factors of policy

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