The selection of specialized strategic energy projects of the regional energy plan on Gyeongbuk province in Korea

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Gyeongbuk provincial government, Korea needs to establish a regional energy plan in 2015 for the next 5 years from 2015 until 2019. It accords to the national basic energy law that every regional provincial government in Korea should implement its regional energy plan every 5-year for the promotion of local economy and sustainable development. Gyeongbuk provincial government has to re-establish a 5-year regional energy plan for the promotion of a specialized regional mid-term energy plan in Gyeongbuk province for coping with the rapid change of energy environment and climate change. In this research, we make a short-list of 7 specialized strategic energy projects by the survey of experts and consideration of its regional environment. We make a prioritization of 7 specialized strategic energy projects by using multi-criteria decision making approach. 2-tier hierarchy is built and it is composed of criteria accounting for local characteristics, market and government policy. Local characteristics consist of local energy demand, timeliness of starting new energy project and possibility of role model in other regional energy plans. In case of market, it accounts for possibility of new regional energy industry creation and job creation possibility. Government policy is composed of national policy adherence, strengthening the capacity of local industry for the climate change and easy to acquire local energy technology. We execute the survey of experts before we prioritize the short-listed energy projects. The analytic hierarchy process which uses 9-points scale is employed for assessing and prioritizing the short-listed of 7 specialized strategic energy projects by making pairwise comparisons of criteria, alternatives and consistency ratio check. The results of this research will provide regional decision makers and regional government officers with the critical decision making data when they focus on the execution of proper regional energy projects considering regional energy environment and limited regional resources including R&D and dissemination of energy related funds.

Biography

Youngjin Ha has his expertise in planning national energy policy and technology dissemination including the establishment of the regional energy plan over 30 years. He carried out the development of rotary kiln type incinerator. He was the former division Director of Technology Transfer and Commercialization division in Korea Institute of Energy Research from 2012 to 2014. He obtained PhD in Energy Policy (Energy Economy), Korea Polytechnic University, Korea in 2009.

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