

Comparison of Electricity Sources in the Environmental Management Aspect

Young Eal Lee

Korea Electric Power Research Institute

103-16, Moonji-dong, Yusong-gu, Taejon, 305-338, Korea

Abstract

National energy plan is addressing environmental issues and energy conservation has come to be regarded as an important element of environmental policy. Nuclear and coal have been selected as the major electricity sources due to the insufficient domestic energy resources, and will provide 62% of total electricity generation in Korea by 2015. According to current situation, it is necessary to compare two major electricity sources in the view of environmental management issues. Up to now, environmental impact assessment between two electricity sources has been focused on the CO₂ emission or economics. But future generation would require the environment friendliness energy policy established objectively with the comparative assessment tool of energy systems. Therefore, the environmental impacts of coal and nuclear fuel cycles are identified and quantified with the dimensionless unit concerning various environmental categories including global warming, acidification and so on. This result will be much helpful to make a decision for the long-term electricity planning and the energy mix optimization with respect to the environmental preservation in Korea

수소제조방식별 비용의 비교

Comparison of hydrogen production costs by option

김승수, 이한명, 이판기, 문기환, 임채영

한국원자력연구소

대전광역시 유성구 덕진동 150

요 약

청정하고 재생가능한 수소에너지에 대한 관심이 증가하면서 생산방법들에 관한 연구개발이 선진국을 중심으로 전개되고 있다. 문제의 핵심은 환경오염을 최소화하면서 경제적인 방법으로 수소를 생산하는 것이다. 기존 수소생산방법의 경제성을 상호비교하고 원자력기술을 중심으로 향후의 기술개발전망을 검토하였다.