CONSIDERATION OF ECONOMICAL ASPECTS FOR PHOSPHORIC ACID FUEL CELL GENERATION SYSTEM

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Abstract

This study performs the economic feasibility test of phosphoric acid fuel cell(PAFC) generation system in power systems of Korea. The 50 KW, 200 KW and 11 MW Classes are considered with the dispersed and on-site types. By estimating the construction cost of PAFC with the fixed and variable costs, the production costs of PAFC are found, and compared with that of combined cycle generation system which shows the similar characteristics. Furthermore, the expected benefits are approximately represented in quantitative costs, when the PAFC generation system is interconnected to power systems. The economically feasible boundary of marginal construction cost is also prepared, and the cost effectiveness of PAFC is determined by using the benefit-cost ratio method.