

Design of Intelligent Energy Systems: A Mathematical Programming Approach

*

(jhryu@dongguk.ac.kr*)

Many chemical and petrochemical processes are energy intensive. Until recently the energy system of these processes has been only concerned with minimizing operation cost by process retrofitting. Changing environments such as sudden uproar of oil prices and supply stoppage due to natural disaster such as Tsunami makes us to face very challenging energy system. The introduction of renewable energy sources makes the corresponding energy system more challenging. In this paper, key issues of energy systems are discussed with the involvement of energy storage system. Numerical studies are presented with some remarks on the further future research directions.