

Quantitative Analysis of CO₂ Emission Reduction by Introducing Stationary Type PEFC Systems

Yutaka Nagata

Socio-Economic Research Center, Central Research Institute of Electric Power Industry, Tokyo, Japan
<nagata@criepi.denken.or.jp>

This study analyzed quantitatively the changes in energy consumption and accompanying CO₂ emission by the penetration of the Proton Electrolyte Fuel Cell (PEFC) cogeneration systems in Japan. The result shows CO₂ emission of overall energy system will decrease in most of the cases, however, CO₂ emission will not decrease in some cases in which the efficiency of PEFC system is not high and energy tax system is reformed as planned in Japan in near future. This paper also analyzed the marginal CO₂ intensity of reduced electricity demand by PEFC system and found it varies by the scenario seriously.

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