

Economic Impacts of Energy Saving Investment to Reduce CO₂ Emission in Japan

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AIM/Enduse model, which is the bottom-up model consisting of energy consumption technologies, can select the least cost advanced technology sets to meet the energy service demand. In order to make active use of these results, the global dynamic optimization model with endogenous technological change has been developed. The results of AIM/Enduse Japan, the relationship between additional energy saving investment and energy efficiency improvement in Japan, reflects the formulation of endogenous energy efficiency change in Japan. By using this dynamic model, the optimal mitigation strategies considering the energy saving investment and their economic impacts under the CO₂ emission constraint can be examined.

Keywords:

CO₂ emissions, Endogenous technological change, Energy saving investment, Integrated assessment models