

Scenario Development of Japan Low Carbon Society toward 2050: Research Framework and Current Results

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It has become clear that drastic reductions in GHG emissions in the latter half of 21st century would be required to avoid critical climate change impacts. This research focuses on developing scenarios to establish the possibility of economically viable, socially acceptable, and technically possible low carbon society in Japan toward 2050. One such scenario is a 60-80% reduction in GHG emissions over 1990 levels for the country. This exercise simulates quantitative parameters such as GDP, service demand, energy demand and supply, and technological diffusion developed using both top-down economic model and bottom-up technology model under the narrative storylines.

Keywords:

Low carbon society, Scenario development, 2050, Japan, Model simulation