

Perspectives of Electric Power Generation in Europe – Dealing with Policy Impacts, Sustainability and Post-Kyoto Targets

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The electricity sector is a main component in the European energy system. The developments in this sector and the evolution of electricity generation technologies will play an important role in tackling the challenges of liberalization, climate protection and security of energy supply.

In this paper the development potential of various electricity generation technologies is presented followed by an analysis of the long-term perspectives of the electric power sector in Europe with a regionalized TIMES model. In different scenarios regarding policy instruments and Post-Kyoto GHG reduction pathways, the economic, supply-side related and environmental impacts of the generation technologies are assessed.

Keywords:

electricity generation technologies, Europe, energy system analysis, GHG mitigation, policies, sustainability