

Expectations Towards Reality: How Renewable Sources Can Help Europe to Meet its Kyoto Target

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The paper aims, by means of a system dynamic model, to understand the feasibility of the EU objective to double its use of renewable sources by the year 2010.

Scenario analysis considers five aggregated sectors - electricity, industry, transport, services and agriculture, residences – covering two investigation areas.

First area. Key forces are growth, efficiency, fuel mix, outlining trajectories from 2000 to 2010 for level of activity, energy intensity and fuel share. The model calculates total CO₂ emissions and money savings in CO₂ emissions deriving from the expansion of renewables.

Second area. A second level scenario analysis outlines how different combinations of technologies (hydro, wind, solar, biomass, other) affect different development paths. The model calculates costs for each scenario.

Costs are compared with benefits to understand the role of renewables in meeting the Kyoto target.