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**ENERGY POLICIES IN SPAIN IN THE CONTEXT OF THE NEW
EUROPEAN ENERGY STRATEGY**

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In order to achieve a 20% reduction of greenhouse gas emissions by 2020, the European Commission recently proposed several energy related goals: improving energy efficiency by 20%; raising the share of renewable energy in the energy mix to 20% by 2020, and increasing the level of biofuels in transport fuel to 10% by 2020.

The objective of this paper is to analyze the impacts of this new European Energy Policy for the Spanish energy system. The analysis uses the MARKAL-Spain model to simulate what energy and technology changes would be required to satisfy the new European energy policy, taking into account the characteristics of the national energy system as well as the national energy policies such as the Renewable Energy Plan 2005-2010, the Energy Saving and Efficiency Plan, the feed-in tariff system for renewable energies, the biofuels tax exemption and the nuclear uncertainties (MITC, 2006).

MARKAL is a detailed, technology-rich (bottom-up) model, that optimizes the entire energy system over 2000-2050 in such a way as to minimize the net discounted total cost of the system (Loulou et al, 2004). The analysis undertaken in this paper relies on the comparison of three kinds of scenarios: business-as-usual (no specific policies), base case (includes the national energy policies) and European policy scenarios. A special attention is given to the future nuclear policies, given their high uncertainties.

The energy and technology results might be useful in order to evaluate the challenge ahead for Spain in the achievement of the new European energy targets, as well as to help decision-makers in defining future Spanish energy policies.

References

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Keywords

Climate-friendly energy policies, Spain, technico-economic modeling