



Energy Security Scenarios of Future Europe

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Energy security has recently become a policy priority for the European Union due to growing concerns about environmental challenges (in particular climate change) and the fact that EU imports about half of its energy needs. The MILESECURE-2050 project provides new scientific knowledge on this issue by developing new European scenarios using multiple perspectives which support and enable energy security. The 2050 timeframe is used to assess the legitimacy and efficacy of policies in terms of the capacity for societies to strengthen energy security and to consider long-term socio-economic impacts of such options.

Present paper illustrates a number of consolidated results from the first major objective of the MILESECURE-2050 project, i.e. the analysis of policies, trends and scenarios from the national to the worldwide level upon energy security and energy transition. In particular, it presents: i) the theoretical framework designed to study the different societal dimensions characterizing energy transition towards a post-carbon society and more energy secure systems and ii) a review of the macro-regional key trends and scenarios emerging from literature, considering different technological options for energy generation and comparing institutional and non-institutional energy and low carbon scenarios. It also offers a geographical-chronological analysis of different technological solutions and future trends.

Keywords: energy transition, energy security scenarios, long term modeling, climate policies, Milesecure-2050.