

# Energy Demand and Climate Change in Europe

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**Abstract** Most papers on energy demand and climate change have focused on the unidirectional linkage between energy-related emissions and effects. Yet energy demand will be also affected by climate change, as the use of most energy goods is obviously related to the climatic conditions. In this article we use different techniques to simulate short and long run demands of energy in several European countries after changes in climatic variables. Following the PESETA common socio-economic and climatic scenarios, we present some energy demand-related physical and economic effects after the estimation of micro and macroeconomic models at (a selection of) country, regional, firm or household levels. Albeit income is found to be a major determinant of future energy demand, energy prices and temperature show a moderate effect on energy demand too. As the effects of climate change will vary across the European continent, some countries will show a considerable increase in cooling relative to heating (energy) needs whereas others will mainly see a reduction in their heating (energy) needs. As a consequence, moderate European-wide alterations in energy demand associated to climate change may disguise much stronger modifications in some countries.

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