

# Climate Change

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Less heating, but more cooling - How will European countries be affected by climate induced changes in the energy demand of buildings?

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Climate change affects the energy demand for room conditioning of buildings. Rising temperatures will cause a reduction in the heating energy demand but could also lead to a strong increase in the cooling energy demand of residential buildings. We present a method to calculate the impact of climate change, retrofitting measures and population changes on the future energy demand of the residential building stock in more than 20 European countries. The aim is to create a national map that shows countries which will benefit from future temperature increases due to strong reductions in the heating energy demand of buildings and losers. In the latter type of countries the increase in the cooling energy demand will be stronger than the reductions in heating energy demand. Finally, there will be countries with a future balance between an increasing cooling energy demand and a decreasing heating energy demand. This European-wide study will be the first study that not only allows for the examination of the impact of climate change on the building energy demand of different countries, but also allow for the determination of the contribution that each country can make to reduce greenhouse gas emissions and to mitigate climate change. First results will be presented for selected countries. A sensitivity analysis shows the contribution of the different influencing factors on the energy demand for room conditioning of buildings by the middle of this century.

Biography

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