

Households' GHG emissions at the Micro Level: A Tool for Smartest Climate Policies

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This paper proposes a method to estimate households' Greenhouse Gas (GHG) emissions at the micro level. Monthly data on households' expenditure for heating and private transport from the Italian Household Budget Survey (HBS) is merged with monthly and bi-annual information on energy prices of liquid fuels and natural gas to obtain an estimate of the quantity of energy demanded. This in turn is converted in carbon dioxide emissions - adopting the appropriate emission factors - providing an appraisal of the non-ETS sector emissions (i.e. emissions not covered by the EU emissions trading scheme) at the household level. This data allows to analyse how GHG emissions evolved in the decade 2000-2009 and how they are associated with households' socio-economic traits. As an example of how these data can support the design of effective climate policies the results of a simulation of a carbon tax on private transport are presented.