Abstract Title: Are current energy efficiency policies promoting a change in behaviour and sufficiency?

Abstract Text:
Traditionally energy efficiency policies have targeted and promoted efficiency technologies (e.g. appliances or cars standards or prescriptive insulation levels or building energy performance standards), which do not always guarantee energy savings (e.g. larger appliances, larger new buildings, more mileage). Some policies may even have incentivised larger energy consumption (e.g. some appliances standards which are easily by larger appliances getting a better energy class). With the new national or regional energy saving targets, policies need to influence consumer behaviour and lifestyle and the concept of sufficiency has to be introduced in the energy efficiency policy discussion and design. Policies targeting sufficiency should be capping or discouraging increasing energy use due to a variety of factors such as increased floor space, increased comfort levels beyond what reasonable, increased number of appliances/equipment/cars and increased use. Policy instruments that may target sufficiency includes: personal carbon trading (i.e. carbon markets with equitable personal allocations; property/car taxation (e.g. related to a building’s CO2 emissions) and/or energy taxation; and progressive appliance and cars standards, and building codes, that will introduce absolute consumption limits (e.g. kWh/person/year) rather than efficiency requirements (kWh/m2/year); and finally an energy saving feed-in tariff. The present paper reviews the concept of energy saving compared to energy efficiency. It shows and analyses existing energy efficiency policies that may have a negative impact on energy consumption, and finally discussed and analyses "new" energy efficiency policies which may encourage sufficiency and a behavioural change. The paper concludes by making some policy recommendations on how to promote behaviour change through innovative policies and prevent increased consumption in existing policies.