Implementing energy efficiency measures in existing housing stock could save 10% of current heating consumption by 2020 and 20% by 2030, according to a recent study of nine European countries. Planning authorities can play a major role by providing support and unbiased information to all stakeholders involved in the renovations.

Across Europe there are a large number of older buildings where refurbishment and retrofitting measures, such as replacing single-glazed windows with double glazing, have the potential to achieve significant energy savings. Such energy efficiency is a priority of the EU’s energy policy. As part of the EU-funded IDEAL EPBD project, this study investigated energy savings that could be made in the existing building stock of nine EU Member States: Bulgaria, the Czech Republic, Denmark, Finland, Germany, Latvia, the Netherlands, Portugal and the UK. In addition, barriers to energy conservation and policies to overcome these barriers were examined in these countries, plus Belgium.

The researchers analysed the inventory of housing stock, previous and potential rates of renovations to improve energy savings and the range and costs of energy efficiency measures in each country. From this, they calculated that a total of 146 TWh/a (terawatt hours per year) of energy (or 10% of the current heating energy consumption) could be saved over the nine countries by 2020. This includes 88 TWh/a of energy savings from single homes and 58 TWh/a from apartment buildings. By 2030, 279 TWh/a of energy (or 20% of current heating energy consumption) could potentially be saved in the nine Member States: 169 TWh/a from houses and 110 TWh/a from apartments.

Four main barriers to the uptake of energy efficiency measures were identified from interviews with stakeholders, including directors of ministries, housing agencies, construction bodies and building renovators in the ten countries considered. Financial concerns formed a major barrier and the most common obstacle was the belief that energy efficiency would not increase the value or rent of a property. Other financial barriers were a lack of affordable schemes to help homeowners switch to energy-saving measures and the non-inclusion of the environmental cost of energy, such as pollution, in energy prices, which reduces the incentive for people to cut their energy consumption.

The other three barriers were: regulatory barriers, including insufficient or lax regulation that do not, for example, set building regulations high enough; barriers related to decision-making, including the inability to make decisions in housing organisations; barriers to information, promotion and education, including low awareness of energy efficiency by consumers, and a lack of skilled individuals to carry out energy efficiency measures. One suggested solution for overcoming some of these barriers is for planning authorities to provide a web-based database containing unbiased information on all products and solutions available.

Among the reported policy measures, nine of the ten countries provide subsidies for energy saving retrofits, and most countries widely provide information on energy efficiency measures. In addition, most countries have an ecological tax, typically an energy tax.