

# FREE – Future of Rural Energy in Europe

The EU aims to be climate-neutral by 2050, an objective at the heart of the European Green Deal and in line with commitments under the Paris Agreement.

The challenge is to make sure this works for all **40.7 million European households located in the rural areas that are not connected to the gas grid.**

The FREE Initiative conducted a study across ten selected EU Member States. Here are key challenges to be considered:



## OLD BUILDING STOCK

In most EU countries, half of the housing stock was built before the first thermal regulations (built before 1970).



In France, the majority (69%) of oil-heated properties are old, built before 1975. [[Insee](#)]



In Germany, most (73%) of the building stock is old, built before 1978. [[Destatis](#)]



In Sweden, the majority (64%) of homes were built before 1971. [[SCB \(Statistics Sweden\)](#)]



## HIGH FOSSIL FUEL USE

Many European homes still heavily rely on high-carbon fossil fuels (oil and coal) for heating.



In Belgium, heating oil accounts for 35% of final energy consumption. [[DG Energy](#)]



In Poland, coal is the most consumed residential fuel, at 50% of final energy consumption. [[DG Energy](#)]



In the Netherlands, gas provides 86% of final energy consumption for rural heating. [[DG Energy](#)]



In Ireland, the majority (36%) of heating is fuelled by oil. [[SEAI](#)]



## FUEL POVERTY

Fuel poverty is a widespread problem across Europe. Up to 125 million people are unable to afford thermal comfort.



In Italy, 6.3% of the population in thinly populated areas are unable to afford to pay their energy bills. [[Bocconi University](#)]



In the UK, 10% of homes are unable to afford their energy bills and 16% of England's off-grid homes are in fuel poverty. [[BEIS](#), [SHCS](#) and [Welsh Government](#)]



In Spain, 9.5% of the population in thinly populated areas reported an inability to keep their home adequately warm. [[EPOV](#)]

## RURAL ENERGY MATTERS

130 million people live in rural areas across Europe. These communities matter and need to be understood. To deliver a just energy transition, policy should reflect conditions in rural areas. However, data is often difficult to find.

This series of country-profiles provides the reader with an accessible overview of the key rural energy challenges in selected EU member states and brings together important datapoints in an accessible review.