

1.8 million people live in rural areas across Ireland, accounting for around two-fifths of the population. 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.

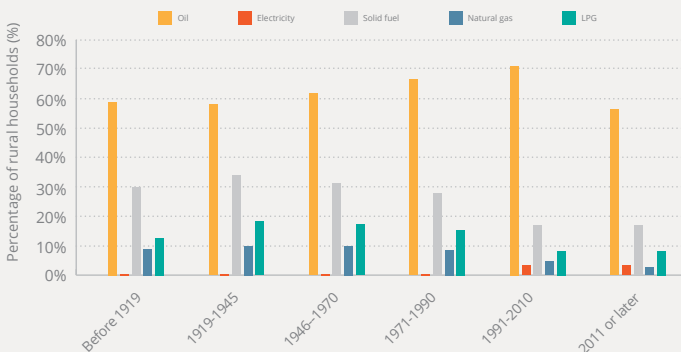
This series of country-profiles provides the reader with an accessible overview of the key rural energy challenges in selected EU member states and brings together important datapoints in an accessible review.

Rural Energy Matters

- **Household oil consumption is very high in Ireland.** 38% of final energy consumption for heating homes is from oil, the most consumed fuel, followed by electricity (25%) and natural gas (22%).
- **Rural GHG emissions from heating have risen recently.** Since 2017, rural emissions have risen by 8%. Compared to 1990, Ireland's total GHG emissions have risen by 15%.
- **The Irish building stock is old.** Most homes (70%) were built before 1983. Heating oil and solid fuels are used more prominently in the oldest dwellings, which are typically less energy efficient and harder to upgrade.

FUEL USE IN IRISH RURAL BUILDINGS

Rural homes fuel use for heating - Age breakdown of buildings

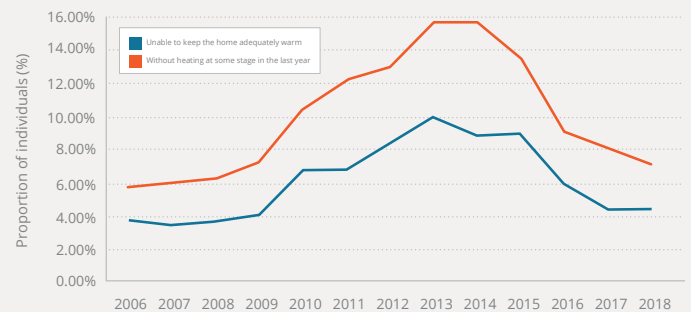


- In Ireland, most rural homes (65%) are heated with oil.
- 42% of the rural building stock is relatively old, built before 1980.
- Older properties are more commonly heated with solid fuels (23%). Older homes are also typically less energy efficient and have higher fuel bills than modern homes.
- Between 2015 and 2018, there was a 3.5% average annual increase in households using oil for heating.

Source: CSO and SEAI (Energy in Ireland 2019)

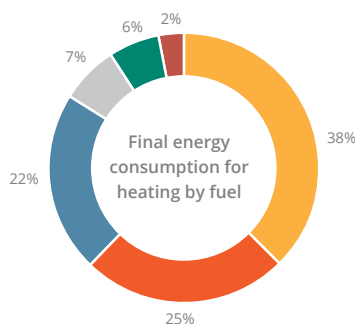
ENERGY POVERTY IN IRELAND

Irish population in fuel poverty



- Energy poverty is an issue across Ireland, with 7% of the population without heating at some stage in the last year.
- Fuel poverty fell from 2013, in line with Ireland's recovery from the recession. However, 4% of individuals were still unable to keep their home adequately warm in 2018.
- Rural households are more at risk of fuel poverty, due to limited opportunities to switch to cheaper fuels.

Source: Survey on Income and Living Conditions (SILC)



Source: SEAI (Energy in Ireland 2019)

RURAL HEAT DEMAND

The majority of final energy consumption for heating in Ireland is derived from oil (38%), electricity (25%) and natural gas (22%).

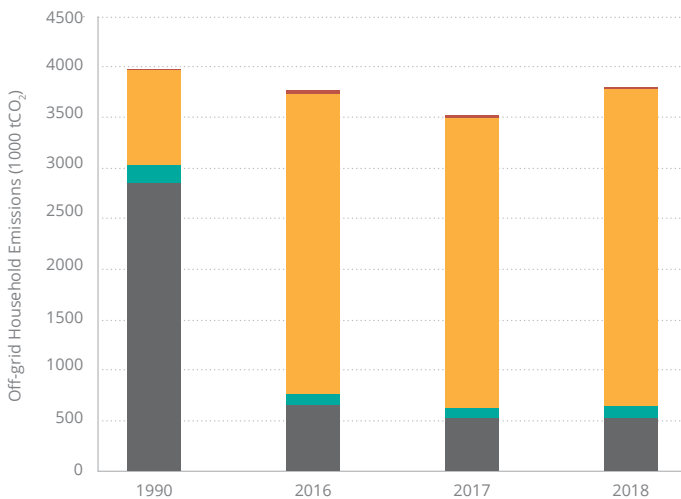
In rural Ireland homes are typically larger, with 83% of the population in detached homes that have a high energy demand. These rural homes consume a higher share of oil (65%) and coal (~7%) - high carbon off-grid heating fuels. Over 10% of rural homes use peat for heating, which generates high pollutants emissions such as NOx and PM. (SEAI)



Ireland - Rural Energy Data

CO₂ RURAL CO₂ EMISSIONS TRAJECTORY

Off-grid household emissions have only slightly fallen since 1990



- CO₂ emissions from rural fuel* consumption have remained relatively stable since 1990.
- Emissions from oil have increased 225%, whilst coal emissions have fallen by 98%.
- Since 2017, rural fuel emissions have risen by 8%, due to an increase in oil and coal consumption.
- Ireland's greenhouse gas (GHG) emissions stand at 63.8 million tonnes (Mt) CO₂e. This has increased 15% from 1990 emissions (56.5 MtCO₂e).
- Per capita emissions are at 13.3 tCO₂e, which are down 28% from 2000 levels (18.5 tCO₂e).

Sources: [Eurostat](#) energy balance data, GHG emissions, emissions per capita
* here defined as heating oil, coal, LPG and biomass

RURAL AIR QUALITY CHALLENGES

Map of rural air quality stations reporting PM_{2.5} emissions in 2017



- Fine particulate matter (PM_{2.5}) exposure has been attributed to 1,100 premature deaths in 2016.
- In Ireland, PM_{2.5} emissions caused total damage costs of €620 million in 2017.
- However, rural air quality monitoring stations did not report PM_{2.5} background emission levels in exceedance of WHO guidelines in 2017 (emission limits of 10 µg/m³ per calendar year).
- Although Ireland's air quality is less of an issue than in other EU countries, there is concern over maintaining standards alongside the high consumption of oil and biomass, that can directly impact air quality.

Source: [European Environment Agency](#), [WHO](#) and [OECD](#), and [EPA](#)

RURAL ENERGY MATTERS

Rural areas account for around two-fifths of Ireland's population. These rural communities are often not connected to the natural gas grid. As a substitute, heating oil and solid fuels are widely consumed for heating purposes.

Decarbonising heat will be necessary if Ireland is to meet its climate change targets. To do this in a just and effective way, policymakers need to balance emission reduction, air quality and energy affordability challenges, all of which impact Ireland's rural communities.



The Future of Rural Energy in Europe (FREE) initiative was created by SHV Energy in 2010 to promote the use of sustainable energy within rural communities. FREE is supported by a variety of stakeholder groups, together giving a voice to all those who believe that rural energy needs are important, and aiming to add new perspectives to the EU's energy and climate debate. Identifying untapped potential in Europe's rural areas to decarbonise and improve air quality in a cost-effective manner. Filling in rural energy data gaps. Engaging and supporting rural communities is essential if government energy, climate and environment policies are to be realised.