



Making the Transition to a Low Carbon Western Region – Where are we now?

Introduction

We have recently updated data from our 2020 report [Making the Transition to a Low Carbon Society in the Western Region: Key Issues for Rural Dwellers](#). In doing this we focused on county data for Western Region counties (Clare, Donegal, Galway, Leitrim, Mayo, Roscommon and Sligo) with an emphasis on some of the areas to be addressed in reducing emissions associated with households in rural areas. In 2022¹ 41% of household greenhouse gas (GHG) emissions came from heating, 36% from transport and 21% from electricity use, so our focus is on the three areas of energy use by rural dwellers which can have significant climate implications:

- Homes and Heating
- Transport and Travel
- Electricity

We explored sources and datasets which were not available in 2020 that give more and better answers to 'Where we are now?' in understanding the patterns in these energy emitting areas for rural dwellers in the Western Region. [Our infographics](#) show key data for each county and in this Briefing the indicators in our county infographics are discussed.

Where data is available, we compare across Western Region counties, the Western Region itself and the rest of the State (i.e. counties other than those in the Western Region). We are also updating our longer more detailed background report, which contains further relevant county level information.

Homes and Heating

The [residential sector](#) accounts for nearly a quarter of energy used in Ireland and is responsible for 15% of national carbon emissions. Consequently, a reduction in emissions from this sector, through improvements in home energy efficiency, could significantly contribute to ongoing efforts to achieve a low carbon transition.

In this section some key statistics for Homes and Heating are examined for Western Region counties, looking first efficiency and Building Energy Rating data.

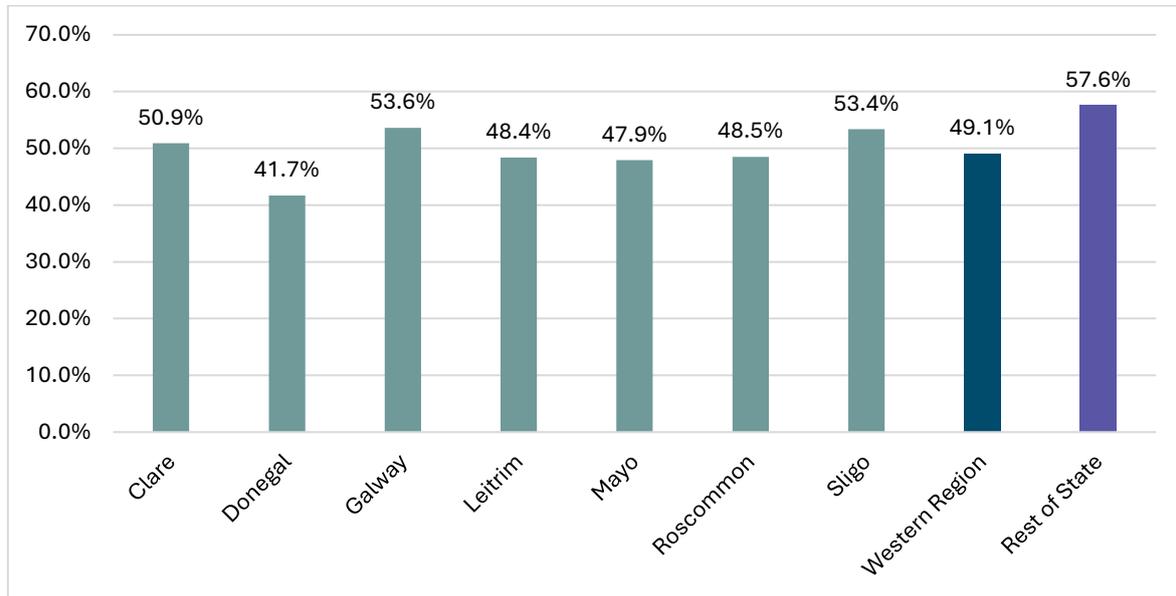
A Building Energy Rating (BER) certificate is required for commercial and residential buildings that have been sold or let since 2009 and all new construction since 2007. Examining BER data provides valuable insights into home energy efficiency. However, as BER ratings are only required for buildings that have been sold, let, or undergone significant construction in the past 28 years, many older buildings which were built at times when energy efficiency requirements were lower will not appear in BER data sets. Nonetheless the proportion of homes with a BER is increasing although it is likely the data shows some element of double counting particularly where homes have been surveyed more than once.

¹ <https://www.cso.ie/en/releasesandpublications/ep/p-defea/decouplingemissionsfromeconomicactivity2022/households/>





Figure 1: Percentage of homes that have a BER certificate



Source: <https://maps.seai.ie/apps/BER/> data exported 10.02.26

Just under half of the homes (Fig 1) in the Western Region (49.1%) have a BER certificate compared to 57.6% of those in the rest of the State. Galway (53.6%) and Sligo (53.44) have the highest rates of BER coverage in the Region. In contrast, Donegal at 41.7% of homes having a BER is much the lowest in the Western Region, while Mayo (47.9%), Roscommon (48.5%) and Leitrim (48.4%) have similar BER coverage levels.

The proportion of homes with a BER is important, when we want to consider what needs to be done to improve sustainability of homes and their heating. It is important to remember, however, that the characteristics of unrated homes may mean that there is a higher proportion of BER ratings in the best categories that would be the case if all houses had been rated.

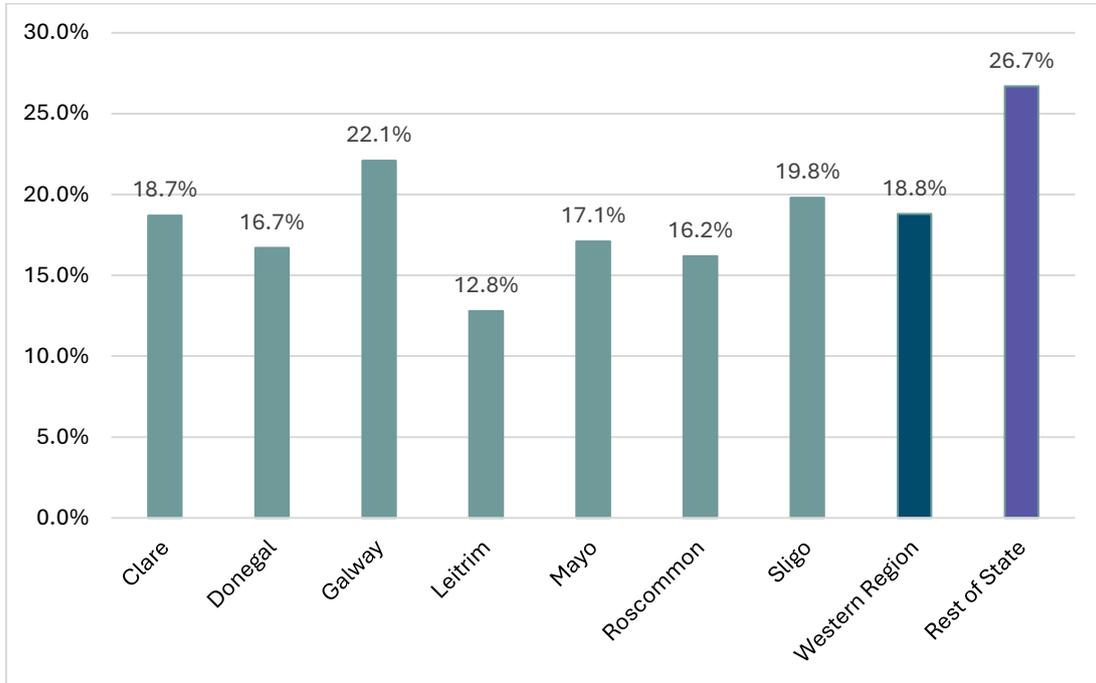
Ireland's Climate Action Plan² (CAP) includes a target of retrofitting half a million homes to a Building Energy Rating (BER) of at least B2 by 2030 and a target of 400,000 heat pumps installed. It is generally assumed that homes with BER ratings of B2 and above are energy efficient and are suitable for heat pumps. It is, of course, more complex than this, but it is nonetheless useful to look at the proportion of certified homes that fall into this category (Fig 2).

² https://assets.gov.ie/static/documents/Climate_Action_Plan_2025_updated_cover.pdf





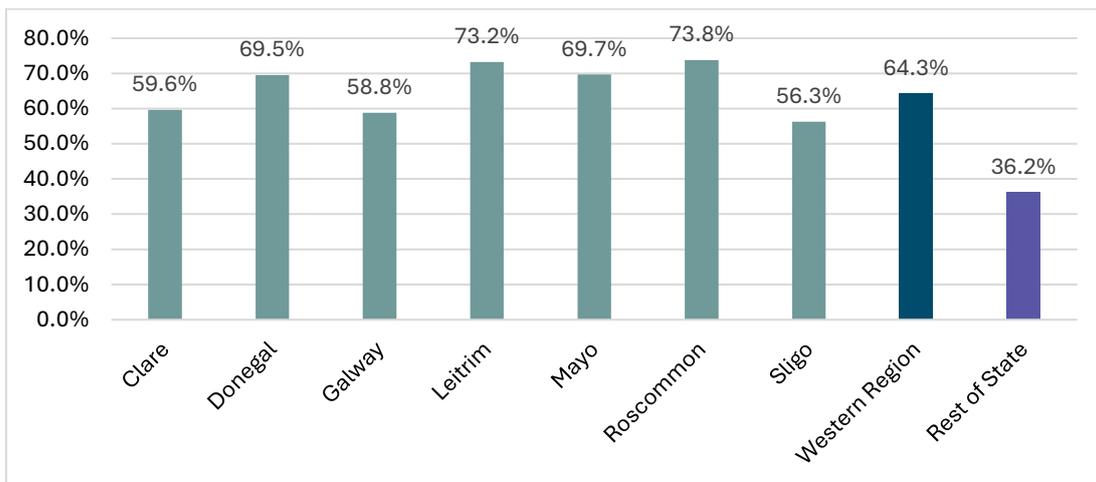
Figure 2: Percentage of homes with a BER rating of B2 and above



Source: <https://maps.seai.ie/apps/BER/> data exported 10.02.26

While fewer than one in five homes with a BER in the Western Region have a B2+ rating, in the rest of the State more than a quarter (26.7%) of the homes do. The counties with the most homes in these categories, Galway (22.1%) and Sligo (19.8%) may do better as they have more urban housing types. There are significantly fewer B2+ rated homes in Leitrim (12.8%) than the other Western Region counties, while both Donegal (16.7%) and Roscommon (16.2%) are well below the rest of the State.

Figure 3: Percentage of homes that are detached houses



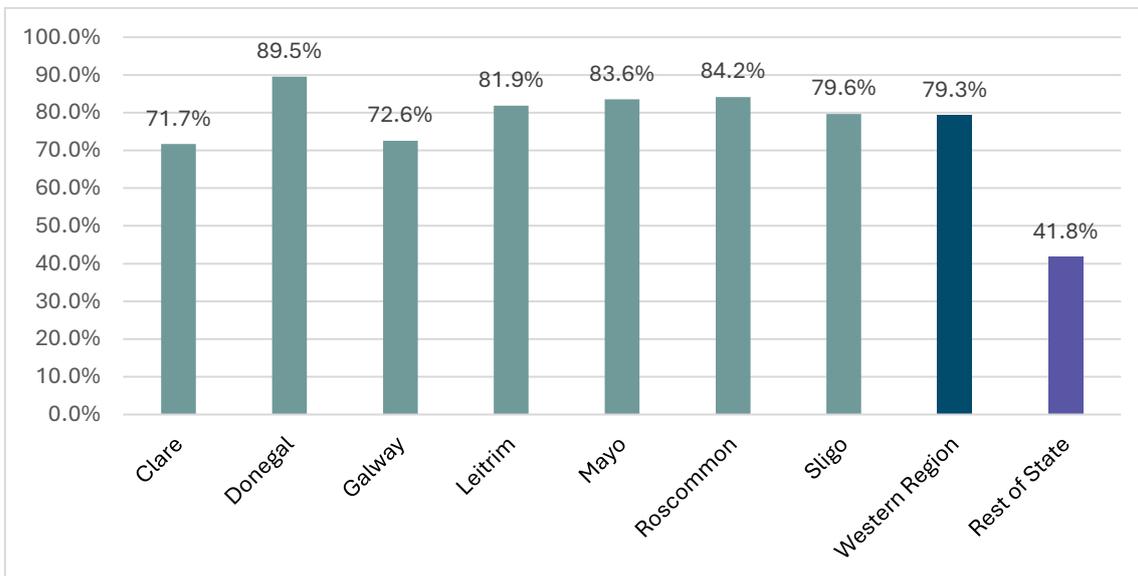
Source: CSO, Census 2022 Private Households in Permanent Housing Units, Type of household <https://data.cso.ie/table/F2003>





Energy efficiency levels and heating choices are influenced by the type of home (Fig 3), with detached houses usually larger, and with higher heat requirements, than alternatives like apartments or terraced houses. Rural dwellers, and areas outside cities, are more likely to live in detached houses. This is shown very clearly by the very significant difference in the percentage of homes that are detached in the Western Region (64.3%) compared to the Rest of the State (36.2%). Among Western Region counties, those with more dominant, larger urban centres have relatively fewer homes that are detached houses with Sligo (56.3%), Galway (58.8%) and Clare (59.6%) having the lowest proportion. In the most rural counties almost three quarters of homes are detached Leitrim (73.2%) and Roscommon (73.8%) which could present particular challenges for improving energy efficiency. In addition to the generally higher heat requirements in detached homes, the type of house is also related to the fuel used for heating (Fig 4).

Figure 4: Percentage of homes that use coal, peat, or oil as main space heating fuel



Source: CSO, Census 2022, Private Households in Permanent Housing Units , Type of Heating. excluding not stated and No central heating <https://data.cso.ie/table/FY037>

Looking at the fuel used for space heating, the Western Region and its counties are far more likely to use coal, peat or oil as the main space heating fuel (79.3% of homes), in stark contrast to the rest of the State with 41.8% of homes using these fuels. A number of factors drive this, particularly the lack of availability of natural gas throughout most of the Region, as well as greater used of solid fuels (especially wood and peat). Electricity is, as will be discussed more below, more likely to be used for space heating in urban accommodation types such as apartment blocks rather than detached houses. This is of course changing with increased use of heat pumps in retrofitted or newer homes, along with an increase in the number of homes with renewable energy sources.

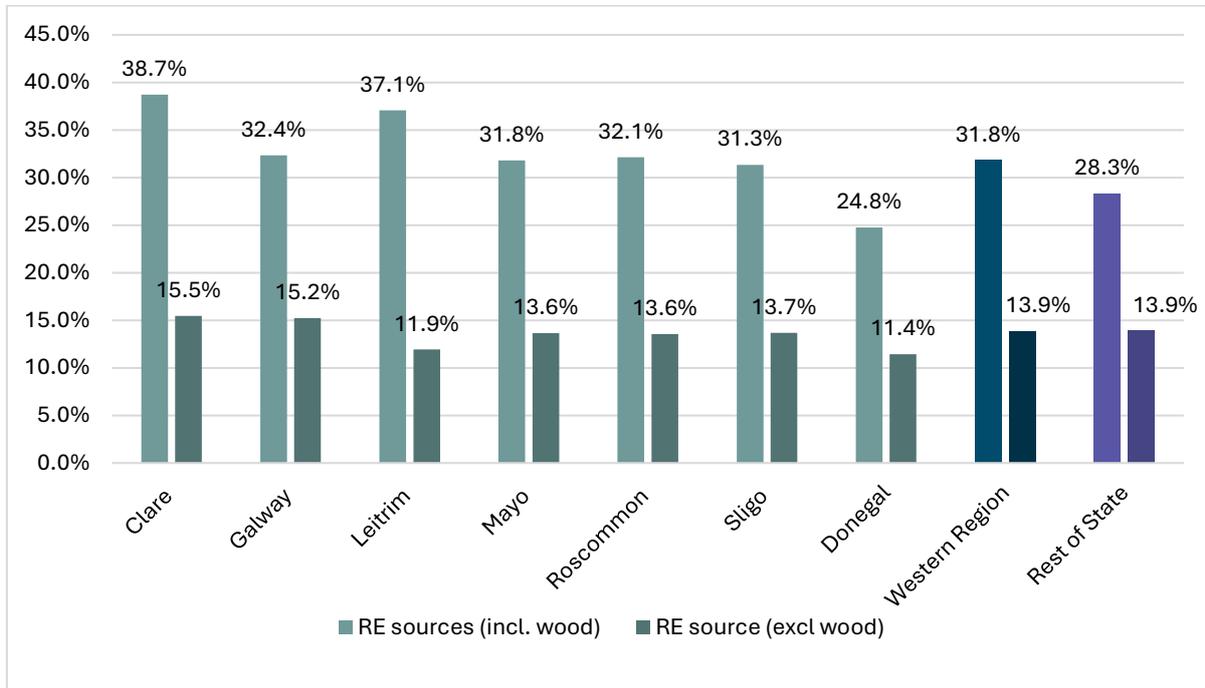
The Census provided detailed county level information on homes with renewable energy sources (either primary or more often secondary energy sources). In this the Western Region performs relatively well (Fig 5), reflecting the higher prevalence of renewable sources in more rural homes. A recent CSO survey³ of household environmental behaviours indicates that this trend continues.

³ <https://www.cso.ie/en/releasesandpublications/ep/p-hebeu/householdenvironmentalbehaviours-energyuse2024/keyfindings/>





Figure 5: Homes with Renewable Energy (RE) sources



Source: Private Dwellings in Permanent Housing Units with renewable Energy <https://data.cso.ie/table/F2067> Excludes not stated

Looking at homes with renewable energy sources in the Western Region 31.8% of homes have renewable energy sources, which is a little higher than the rest of the State (28.3%). When wood is excluded the Western Region and the rest of the State showed the same level (13.9%). Clare has the highest level of homes with RE sources in the Region (38.7%) and is also highest when non wood energy renewable sources are included. Leitrim also showed a relatively high proportion of homes with renewable sources (37.1%) but when wood is excluded, this drops to under 12%. It should be remembered that this statistic includes both secondary heating sources (such as stoves and fires) as well as electricity generation and hot water heating using solar energy (both photovoltaic for electricity generation and solar thermal for water heating).

Transport and Travel

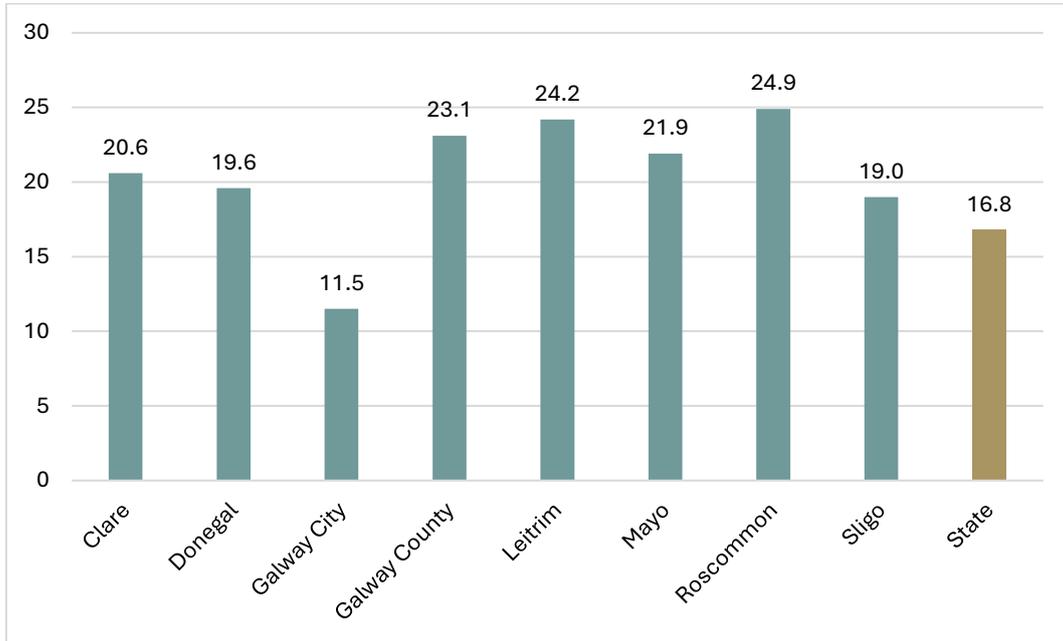
One of the key elements required for a transition to a low carbon Western Region will be emissions reduction from transport. Addressing transport and travel in rural regions is complex. In order to understand what needs to be done to reduce emissions from rural travel, we need to know what our travel patterns actually are. In this section we consider some key transport and travel statistics for Western Region counties.

Journeys to work (Fig 6) make up a significant proportion of daily journeys made, so the distance to be travelled to work can have an important influence on potential transport emissions in each county. As a rural region it could be expected that distance from the workplace would be greater than in more urban areas.





Figure 6: Distance to the workplace



Source: [F7128 - Distance to workplace by population aged 15 years and over at work, usually resident and present in the State](#) CSO Census 2022

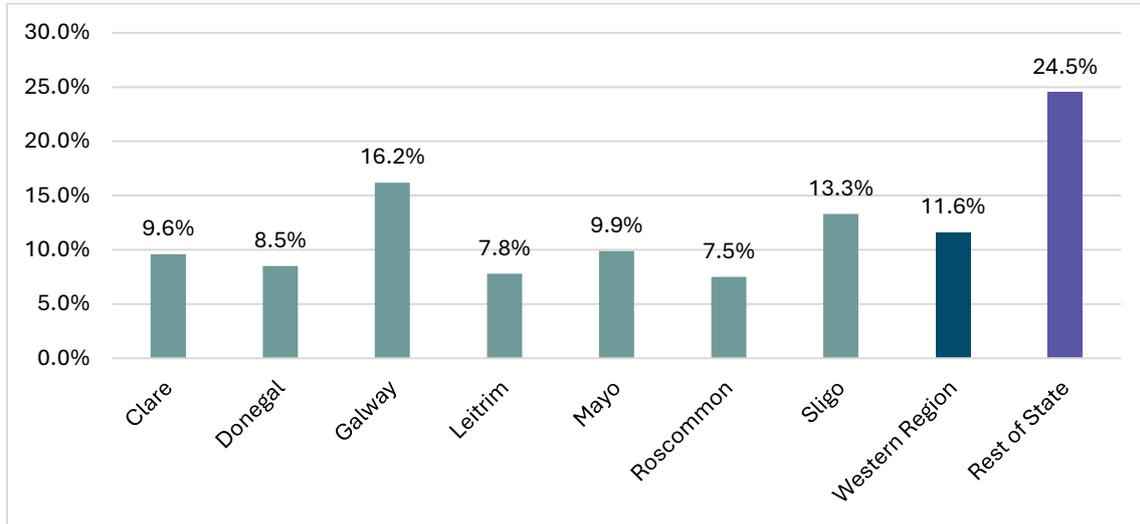
This is illustrated (Fig 6) in Galway City, the only Western Region administrative area where the average distance to the workplace is less than that for the State as a whole (11.5km vs 16.8km). Sligo, one of the more urban Western Region counties has the next lowest average distance to the workplace (19km), while workers in the most rural counties of Roscommon (24.9km) and Leitrim (24.2km) have the second and third highest average distance from work in the State (Laois has the highest). This higher average distance to the workplace in the Region clearly influences emission levels and choice of mode, both of which pose difficulties for a transition to the use of more sustainable modes of travel to work.

Looking at rates of use of more sustainable modes of transport to work (public transport, cycling or walking) highlights the challenges for the Western Region counties (Fig 7). The Western Region shows significantly lower use of these modes (11.6% of those travelling to work) compared to that in the rest of the State (24.5%). Within the Western Region, level of rurality is a significant factor with the lowest use in the more rural counties (Roscommon, Leitrim and Donegal) and highest use of sustainable modes in counties with more significant urban centres such as Galway (16.2%) and Sligo (13.3%) although both are still relatively low when compared nationally.





Figure 7: Percentage walking, cycling or using public transport to travel to work

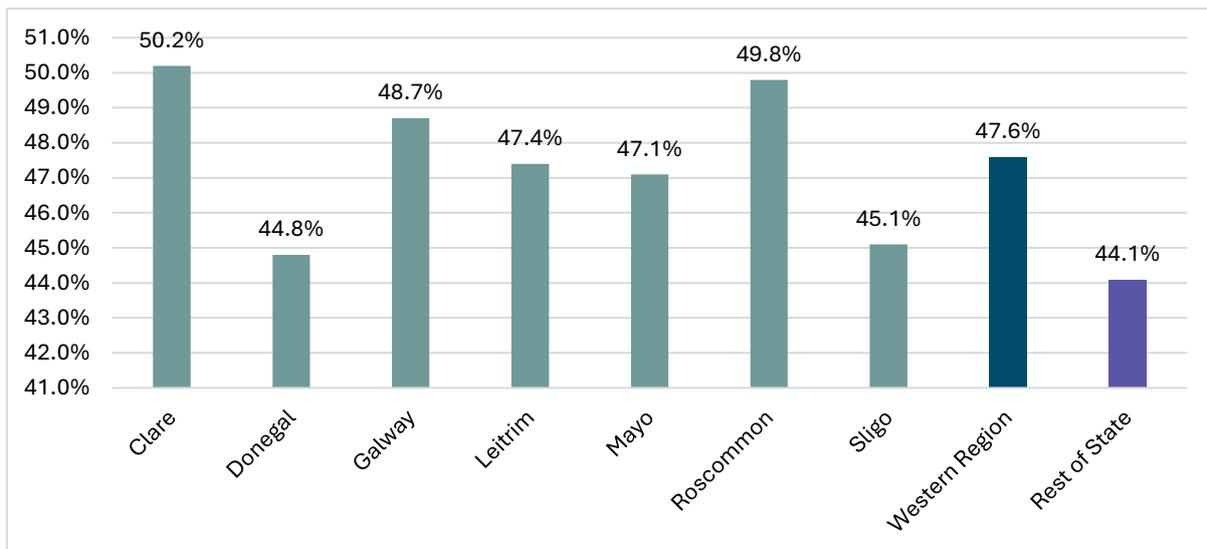


Source: F7065 Means of Travel CSO Census 2022 <https://data.cso.ie/table/F7065>

A number of factors contribute to this including distance to travel as well as availability of public transport at appropriate times for commuting, while relative lack of road congestion in rural areas often makes car travel faster and easier than alternatives.

It is clear that for a variety of reasons car travel remains a dominant mode of transport in rural areas, but in the transition to low carbon it may be that, rather than expecting households not to have more than one car, the focus could be on the substitution of second (and other cars) with more sustainable alternatives. It is useful, therefore, to understand levels of car ownership among Western Region households (Fig 8).

Figure 8: Percentage of households that have at least two cars



Source: FY091 Motor car availability, Census 2022 <https://data.cso.ie/table/FY091> excl. not stated. Galway total own calcs

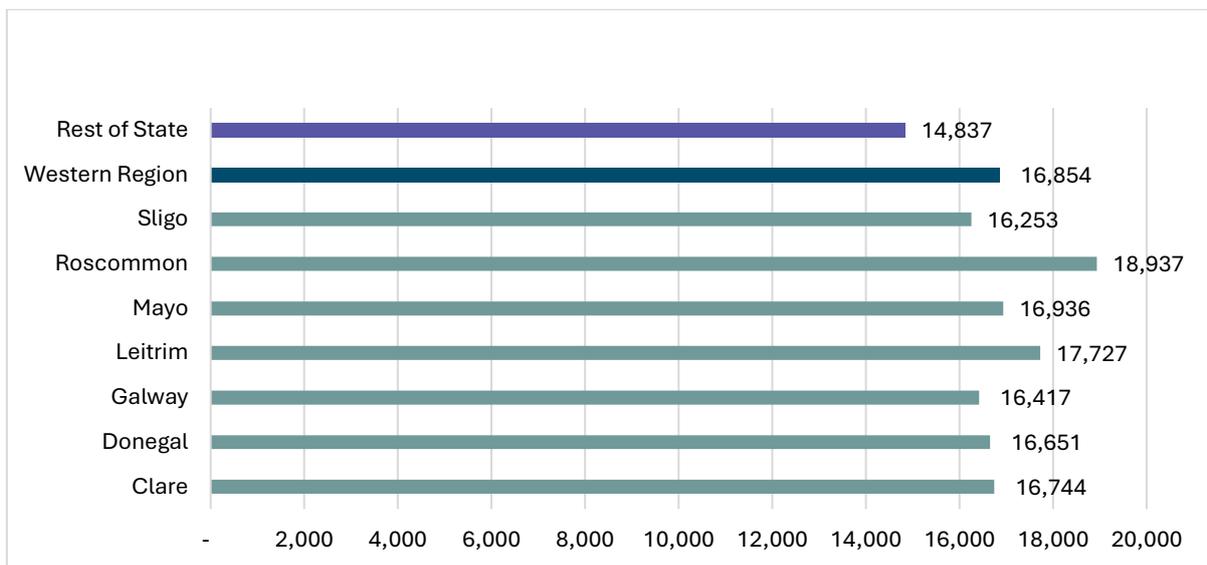




In all Western Region counties, a higher proportion of households (47.6%) have two or more cars than the state average (44%). This average hides fairly significant variation among counties. The lowest proportion of households with two cars is in Donegal (44.8%) which is similar to Sligo (45.1%). Multiple car ownership is highest in Clare (50.2%) and Roscommon (49.8%) while in Leitrim and Mayo, which are also very rural, just over 47% of households have two or more cars.

In considering reliance on cars as a mode of transport in the Western Region, it is useful to look at the average distance travelled per vehicle (Fig 9). Not surprisingly, given its rural nature, distances to many services and relative lack of public transport, the average kilometres travelled by vehicles in Western Region counties (16,854 km per vehicle) is significantly larger than the average for the rest of the state (14,837 km).

Figure 9: Average distance travelled per vehicle annually (km)



Source: CSO, Average Kilometres Travelled (km) <https://data.cso.ie/table/THA18>, WR and Rest of State own calculations

Not unexpectedly, the highest average annual mileage is Roscommon (18,937) which is the highest nationally, with Leitrim (17,727 km) in second place. Interestingly, other counties in the rest of the State take the next highest ranks, with Mayo and Clare ranked 10th and 11th. In the Western Region, Sligo has the lowest average (16,253 km) followed by Galway (16,417 km). Counties which may be associated with long commuting to Dublin also show high average mileage (Longford, Cavan, Offaly, Laois and Monaghan).

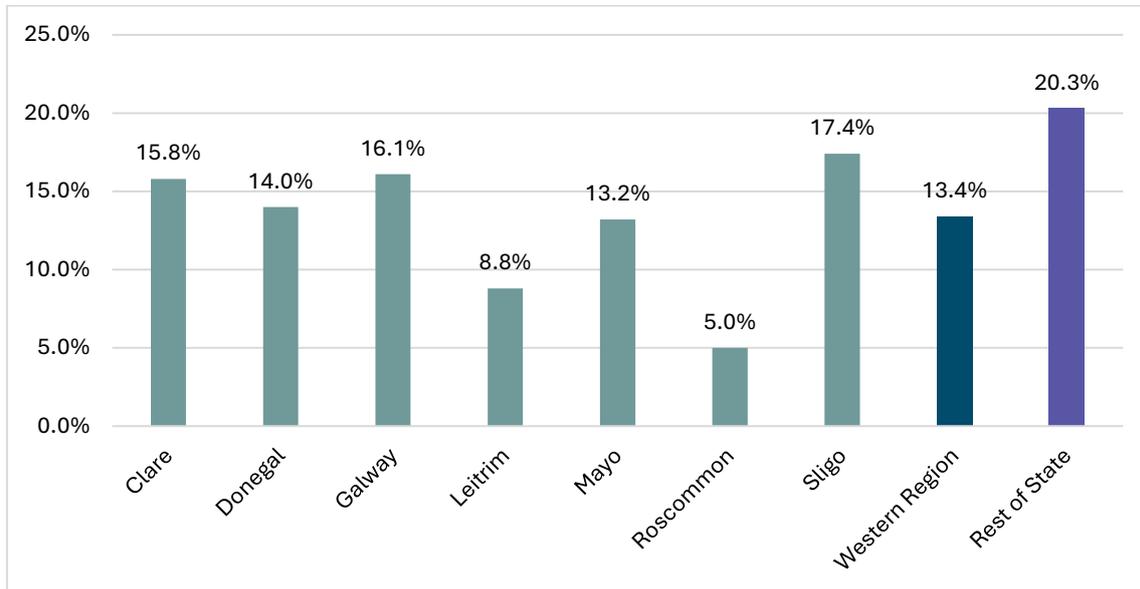
The Climate Action Plan 2023 (and the updates in 2024/2025) targets a 20% reduction in total vehicle kilometres driven by 2030 with actions to be developed as part of a [National Demand Management Strategy](#). Reducing vehicle numbers and switching to more sustainable modes of transport have been discussed above, a focus on reducing average mileage has a role to play in improving transport sustainability in Western Region counties.

As Western Region counties have a higher proportion of multiple car households than the rest of the State, and those cars travel further, if we have an emphasis on switching to more sustainable transport options, it is interesting to look at the proportion of new cars that are electric (Battery Electric Vehicles i.e. fully electric are being considered here (Fig 10)).





Figure 10: Percentage of new private cars registered in 2025 that are electric



Source: CSO Vehicle Licensing Statistics TEM 27, new and second-hand private cars <https://data.cso.ie/table/TEM27>

The longer distances travelled by Western Region cars may help explain why the Western Region (13.4%) and its counties have a lower proportion of new electric car registrations than the rest of the State (which averaged just over 20% in 2025). Sligo had the highest rate of new electric car registrations in the region at 17.4%, followed by Galway (16.1%) and Clare (15.8%) and, while lower than other counties in the State, electric car registrations in recent years have shown significant growth in the Western Region as well as nationally. The lowest rates of new electric car registrations are in the more rural counties of Leitrim (8.8%) and Roscommon (5.0%) which is the lowest in the country. Rurality and distance per vehicle likely play a role here, but in the case of Roscommon, other factors may also apply⁴.

Electricity

As part of the low carbon transition there is a move towards electrification of energy in the home. New data sources available since the publication of our first report on the low carbon transition for rural dwellers in the Western Region allow us to better understand some of the patterns of electricity use in the Region.

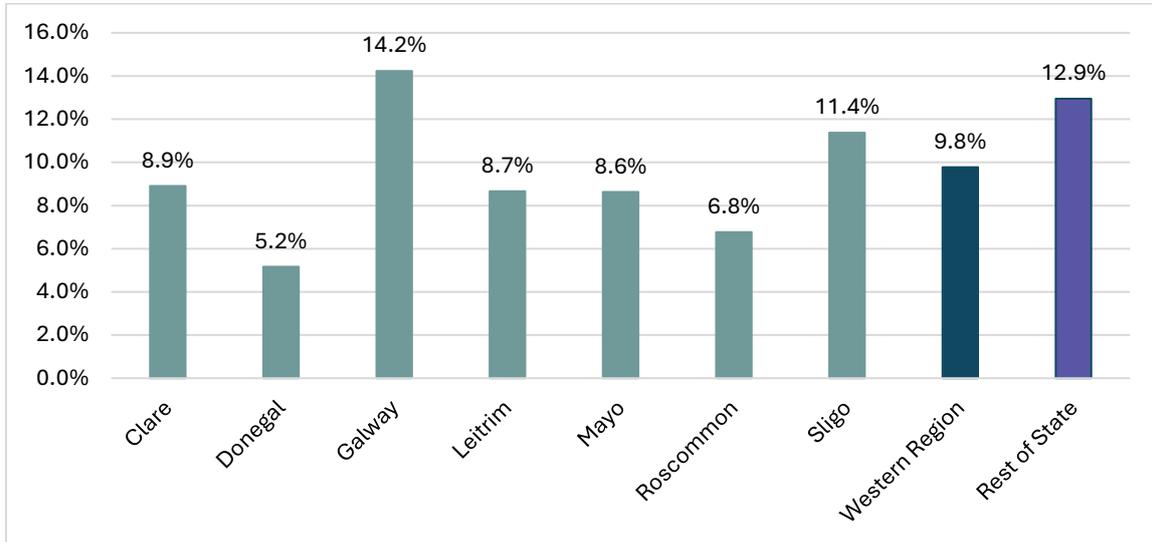
As discussed above, the type and location of household influence the fuel used for space heating. Within the Western Region only 9.8% of households reported using electricity (Fig 11) as their main central heating fuel compared to 13% in the rest of the State. Donegal (5.2%) and Roscommon (6.8%) use electricity for heating significantly less often than the Western Region average.

⁴ <https://wdcinsights.wordpress.com/2016/01/25/here-is-the-reason-there-are-so-many-new-cars-in-roscommon/>





Figure 11: Percentage of homes using electricity as main source for space heating 2022

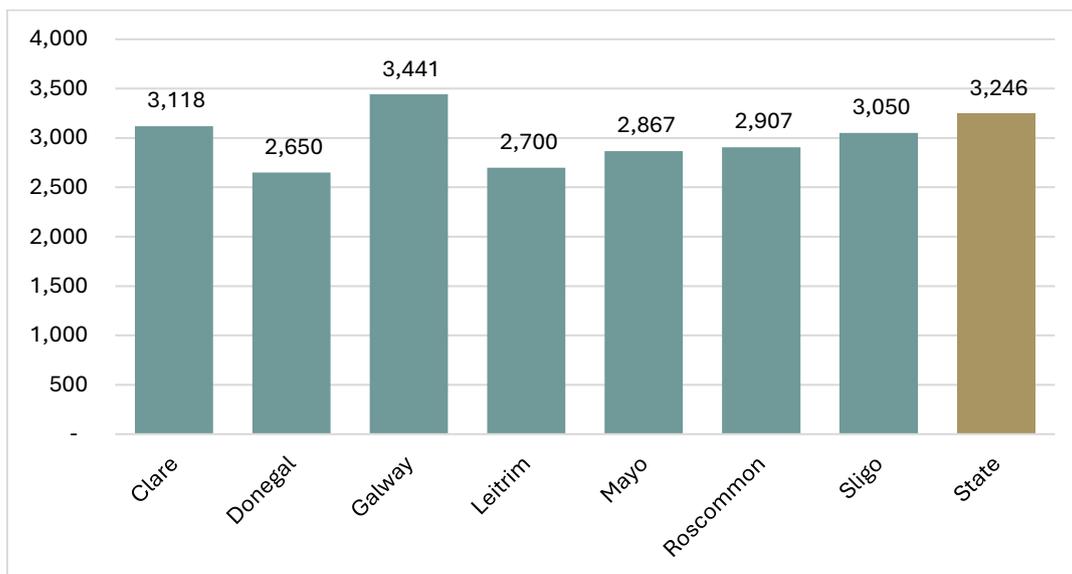


Source: CSO, Census 2022, Private Households in Permanent Housing Units, Type of Heating. excludes not stated and No central heating <https://data.cso.ie/table/FY037>

Galway, however, is more reliant on electricity for space heating than the rest of the State. The use of electricity for heating is, as discussed above, related to the type of housing, location (urban or rural) and the age of the home.

In recent years the CSO has provided data for median residential electricity consumption by county. All Western Region counties, except Galway, have electricity consumption lower than the state average, with Donegal and Leitrim having the lowest in the Region and the State. Western Region counties have among the lowest consumption, accounting for six of the bottom eight nationally, the exception being Galway with the 9th highest median consumption nationally.

Figure 12: Median residential electricity consumption 2024 (kWh)



Source: MEC03 Metered Electricity Consumption <https://data.cso.ie/table/MEC03>

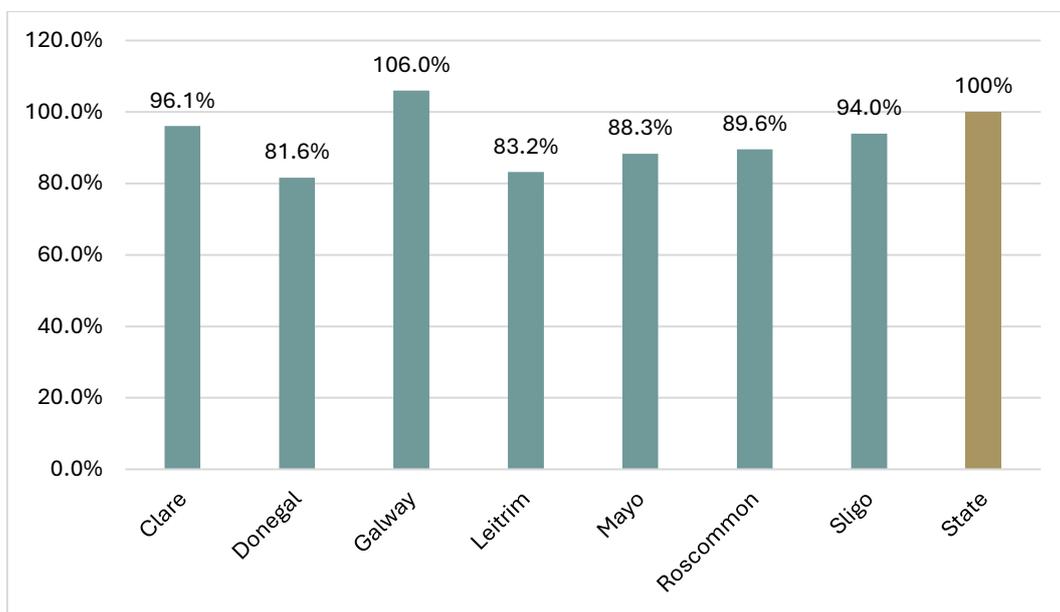




As discussed, there are a number of different drivers of electricity consumption, including urban housing types, income and also the move to electrify heating and transport. The more rural counties (most Western Region counties) tend to rely more on other forms of spaces heating (such as solid fuel and oil— see above). Thus, patterns of electricity consumption can give a mixed signal. Lower consumption may be driven by different patterns of energy use, greater efficiency or slower electrification of the energy system.

Looking at median residential consumption relative to the state (Fig 13), all Western Region counties, with the exception of Galway, show relatively lower electricity consumption than the State (Western Region and rest of State figures are not available). Consumption in Galway is likely influenced by the relatively high use of electricity for space heating in the city, and may also be associated with higher income level.

Figure 13: Median residential electricity consumption relative to State



Source: MEC03 Metered Electricity Consumption <https://data.cso.ie/table/MEC03>

While more widespread installation of heat pumps in homes and adoption of EV vehicles will increase the electricity demand in the residential sector, home solar generation will also affect patterns of electricity consumption and overall levels of demand for, and timing of, the consumption of electricity from the grid.

We don't usually associate the Western Region with lots of sunshine, but Energia data on annual sunlight hours in Ireland shows that certain counties within the Western Region have an advantage in domestic solar PV generation. According to their measure, counties Clare, Sligo and Galway are fifth, sixth and seventh nationally in total sunlight hours⁵. Other data⁶ on sunshine, however, shows very different results, although Clare remains the sunniest Western Region county.

⁵ <https://www.energia.ie/about-energia/latest-news/ireland-best-county-to-go-solar>

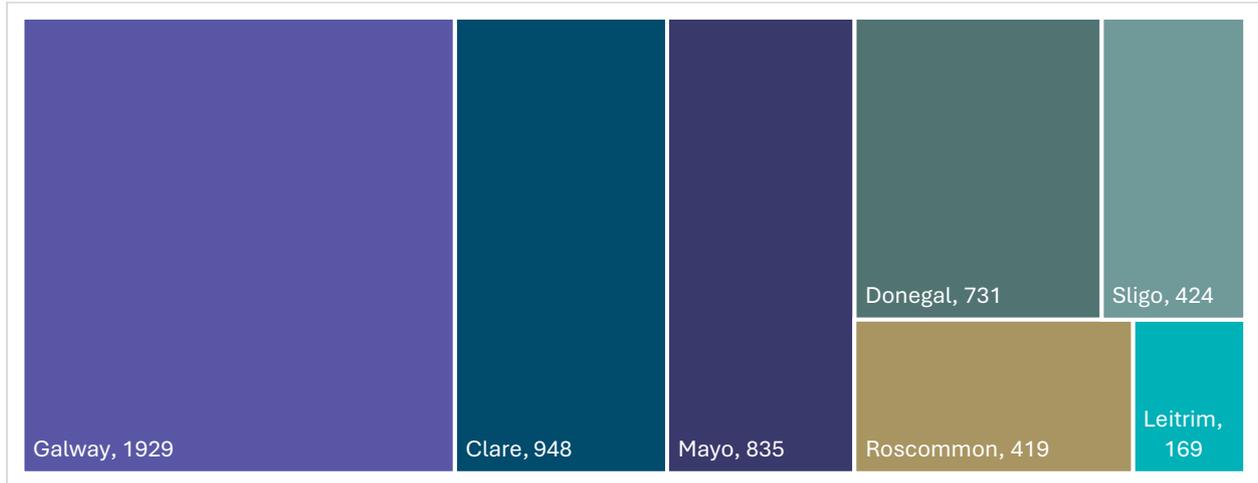
⁶ <https://www.bluejayliveability.com/sunshine/>





Even in less sunny inland counties, home solar panels are an increasingly important element of the low carbon transition, with a significant increase (25%) increase in solar panel systems installed in Ireland in 2024, and with almost every county in the Republic seeing an increase on 2023 figures.

Figure 14: Number of home solar panel installations, 2024



Source: <https://energyefficiency.ie/blog/solar-installations-by-county-2024/>

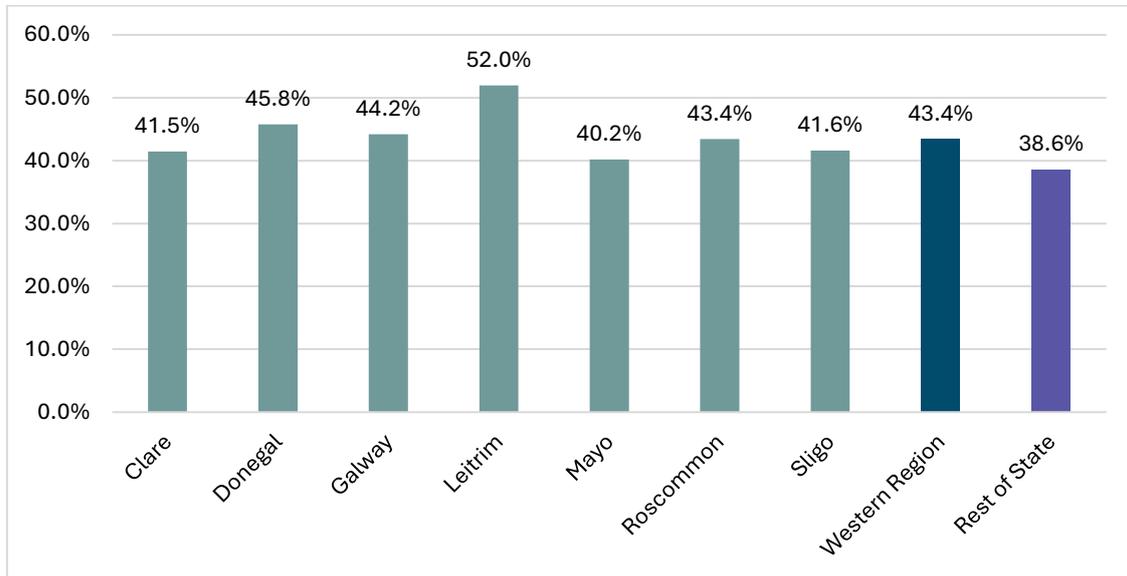
Data on solar PV installation data from 2024 (Fig 14) shows that the Western Region installed 4,900 solar panel systems in 2024, making up 17.4% of national installations (an increase of over 1,200 from 2023). There was a 24% increase in solar panel installations in 2024. County Mayo had the second highest percentage increase from 2023 with installations up 42.2%, from 543 to 835.

Finally, while the focus of this analysis is on issues for rural dwellers, but it is interesting to consider the relative importance of residential electricity consumption in the county context as different consumption patterns will require different policy responses. Electricity consumption data for each county is broken down by residential and non-residential consumption (Fig 15).





Figure 15: Percentage of Electricity Consumption that is residential (2024)



Source: Metered Electricity Consumption <https://data.cso.ie/table/MEC03>

Residential consumption in 2024 accounted for 43.4% of electricity consumption in the Western Region counties, which is significantly higher than that for the rest of the state (38.6%) implying more industrial and commercial demand in other areas. This is not unexpected given, given the more urban nature of the rest of the state and the associated higher levels of commercial and retail services in other regions.

Looking at the Western Region counties, there is very significant variation that likely aligns not only with rurality but also with levels of industry and manufacturing. In Leitrim, the most rural county more than half (52%) of electricity consumption is residential, which is significantly higher than the other Western Region counties, while in Mayo just over 40% of consumption is residential, reflecting the relatively high proportion of manufacturing enterprises in that county.

Conclusion

This brief summary has provided a snapshot of where we are in relation to making the low carbon transition in Western Region counties.

Many thanks to Jay Bell who worked with the WDC on placement in Summer 2025 and pulled together much of the data and found many new and useful sources. These give us more insight into the challenges of the low carbon transition for rural dwellers and have also allowed us to highlight where we are doing well.

For further information please contact: Dr Helen McHenry, Policy Analyst, WDC

