

Assessment of Measures and Supports to Mitigate Energy Poverty

Evaluating Income Supports against Home Energy Upgrades as Tools to Protect Vulnerable Households from Energy Poverty



Energy Poverty Across Ireland

Energy Poverty can be defined many different ways: the most consistent definition across academic literature is that households who spend 10% of their income on energy bills are deemed to be in energy poverty. Prime19's research estimates this to be 11.5% of all households across Ireland.

Definition	Expenditure to Income Threshold	Poverty Level	Estimated Number of Households
Standard Energy Poverty	10%	11.5%	211,017
Severe Energy Poverty	15%	2.4%	44,418
Extreme Energy Poverty	20%	0.6%	11,938

Table 1: Energy poverty thresholds and estimated households affected, Prime19 analysis of Census 2022 Small Area data

Energy poverty is not spread evenly across the country. Prime19's analysis identified 67 Small Areas in which more than 85% of households are in energy poverty. These areas share a clear demographic signature: unemployment at twice the national rate, a markedly older population, and a disability rate more than double the rest of the country. Age, ill health and low-income cluster together, and they cluster in the least efficient housing.

Characteristic	Areas with over 85% of households in energy poverty	All other Small Areas
Total Small Areas	67	18,852
Total Households	5,650	1,837,774
Mean unemployment rate	7.0%	3.5%
Mean % of population over 65	22.6%	16.1%
Mean disability rate	8.2%	3.8%
Mean % of population under 18	17.4%	22.6%

Table 2: Characteristics of Small Areas with the highest rates of energy poverty

To combat energy poverty, the government have two distinct approaches: income supports and home energy upgrade measures.

Income Supports: Immediate Relief, Recurring Cost

Income supports offer immediate relief against higher-than-expected energy bills: in a short-term crisis of shocks to energy prices, income supports can protect households who are vulnerable. This relief also has an ‘upward investment’ effect: income supports can help older and more vulnerable people keep their homes warm during winter, reducing the chance of cold-related injuries and health problems, which lessens the strain on healthcare.

In 2024, four schemes were in place, each with the target of reducing the burden of electricity bills on household spending. The Electricity Credit was available to all households, while only certain households were eligible for Fuel Allowance, the Household Benefits Package, and/or Additional Needs Payments. For one year alone, government spending on income supports surpassed €1.3 billion.

Income Support	Recipients	Expenditure (€million)
Household Benefits Package	521,699	220.97
Additional Needs Payments ¹	12,178	6.141
Fuel Allowance	423,921	510.23
Electricity Credit	2,280,000	570
Total	3,237,798	1,307.34

Table 3: Government expenditure on income supports for household bills, 2024

While income supports can reduce the strain of energy bills on households, expenditure can spiral quickly. If energy bills keep rising, the monetary value of income supports need to rise as well to ensure that vulnerable households are not left behind. This leads to significant opportunity cost: billions are spent on mitigating against energy poverty, but the root causes of high energy bills are not challenged.

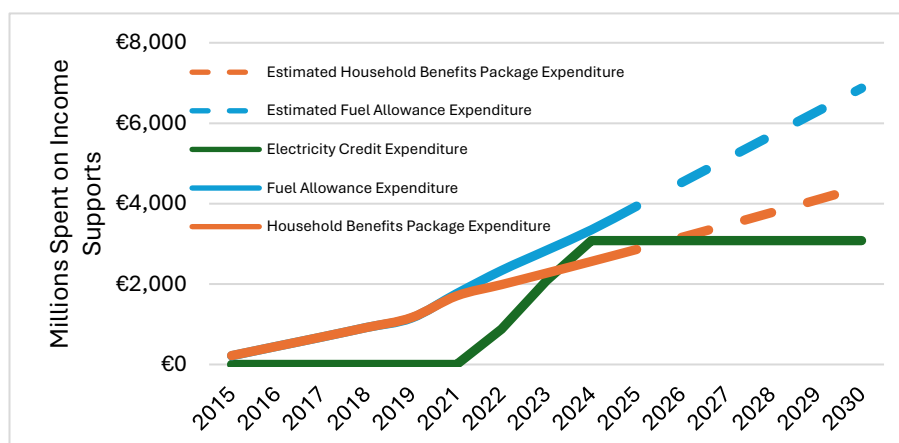


Figure 1: Cumulative government expenditure on income supports

¹ Figures for Additional Needs Payments are as of 2022 and only include payments which were specifically made for household bills, heating, or energy costs. <https://www.gov.ie/en/department-of-social-protection/collections/annual-statistics-report-tables-2022/>

Home Energy Upgrades: Tackling the Root Cause

The shocks that cause energy bills to skyrocket for Irish customers are often geopolitical events which Ireland has little control over. As the price of gas and heating oil increases due to these events, inefficient Irish homes need to spend more on fuel to keep their homes at an adequate, safe temperature. Inefficient homes require more fuel to maintain an adequate temperature, so increases in fuel prices disproportionately increase the energy bills of inefficient homes.

Prime19's research shows a clear link between energy inefficiency and energy poverty. This link is exactly why home energy upgrades can target energy poverty more effectively: while they require more of an upfront investment, they target the root cause of energy poverty: inefficient homes.

By improving the energy efficiency of homes, vulnerable households receive immediate support from a decrease in energy bills as well as protection against spikes in fuel prices worldwide, as their dependence on fuel decreases.

The Most Effective Energy Upgrades

All home energy upgrades reduce energy consumption and energy bills somewhat, but some upgrades are a lot more effective than others at reducing energy poverty. While heat pumps are effective at making homes more efficient, they require a certain level of energy efficiency before they can be implemented, making them less effective at targeting energy poverty, as households might not be eligible for its installation.

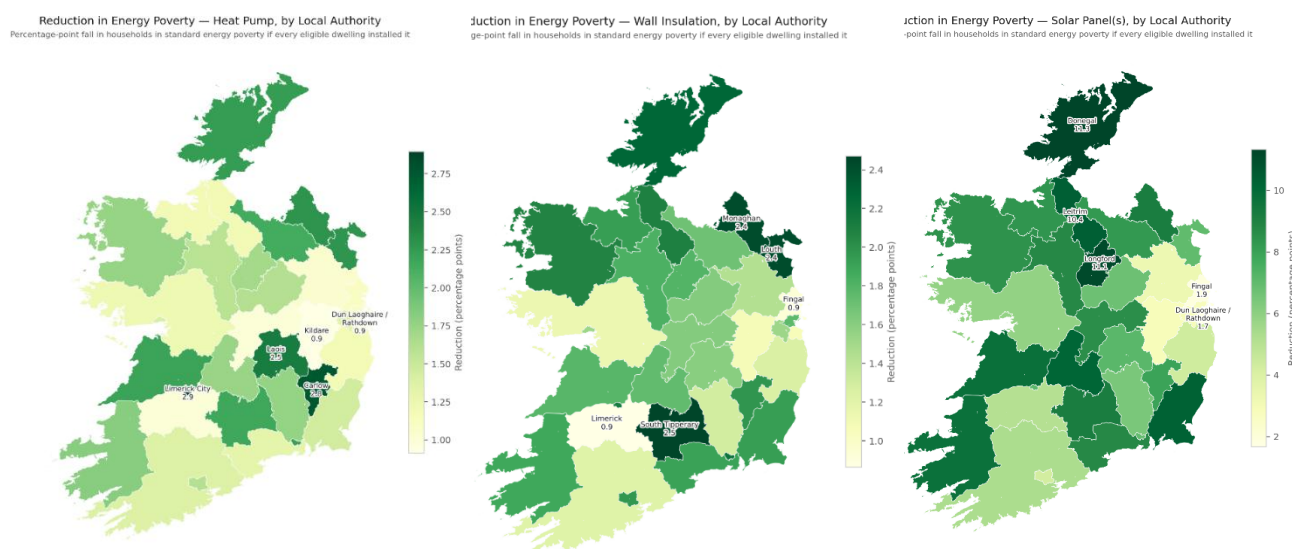
Wall and attic insulation are widely applicable and reduce the amount of energy homes need to be kept warm, but these homes are still reliant on oil and gas for fuel, leaving them exposed to geopolitical shocks in fuel prices.

Prime19's research concluded that solar panels were the most effective tool in reducing energy poverty. Not only do solar panels allow for homes to generate their own electricity, but they can even sell electricity back to the grid, reducing their energy bills further.

Measure	Homes eligible	Reduction in energy poverty	Average cost	Average grant	Average net cost
Solar panel	71.1%	5.32%	€6,766	€1,636	€5,130
Internal wall insulation	85.7%	2.22%	€17,796	€3,297	€14,499
Triple glazed windows	89.8%	1.82%	€19,856	€2,870	€16,987
External wall insulation	61.7%	1.46%	€16,884	€6,455	€10,429
Air to water heat pump	39.0%	1.43%	€14,147	€6,216	€7,931
Attic insulation	47.8%	0.71%	€1,914	€1,317	€597

Table 4: Impact of individual upgrade measures on national energy poverty, if applied to every eligible home

These charts also emit an important factor in home energy upgrades: different measures can be combined to stack on top of each other. Inefficient homes can first receive wall and attic insulation, which could make them eligible for a heat pump, reducing their energy bills significantly.



Comparing the Two Approaches

The two approaches differ less in how much they cost than in how often they have to be paid. A National Retrofit Plan upgrade averaged €6,400 in public funding in 2024 — once. The Household Benefits Package averages €544 per household and Fuel Allowance €1,200 — every year, indefinitely. On Fuel Allowance rates, a single upgrade costs roughly five years of payments, and deep retrofits can cut a home's energy consumption by around 50%.

Comparison	Income supports	Home energy upgrades
What it changes	Household income	Household energy demand
Speed of effect	Immediate	Weeks to months
Average cost per household	€544 (HBP) to €1,200 (FA)	€6,400 in public funding
How often paid	Every year, indefinitely	Once
Effect of a price shock	Support must be increased	Household is insulated from it
Duration of benefit	Ends when payment ends	Lifetime of the measure

Table 5: Income supports and home energy upgrades compared

Scenario modelling shows why this matters. In an adverse case, electricity costs rise a further 17.3% and median annual bills reach €1,800. Holding bills at 2020 levels through the Electricity Credit alone would then require €690 per household — **€1.5 billion a year**. Benchmarking Fuel Allowance and the Household Benefits Package against energy prices instead would cost €937 million annually. Neither figure ever stops recurring.

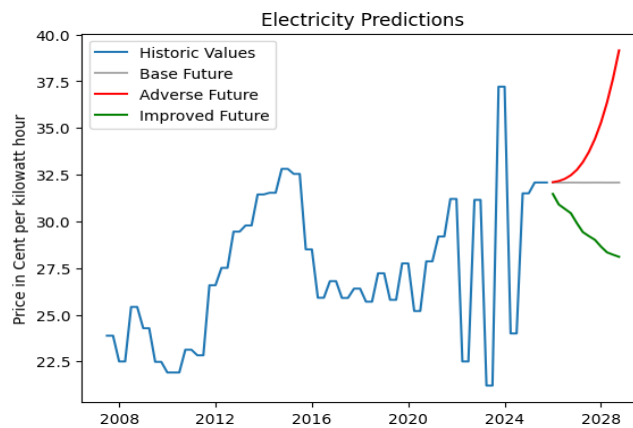


Figure 3: Electricity price scenario predictions

The Energy Poverty Toolkit

As part of Prime19's research, we have developed an interactive toolkit which can measure the impact of energy efficiency upgrade measures at national, regional, and local levels. Users of the toolkit can find the specific locations for where certain upgrade measures are most appropriate, and where they are the most effective for reducing energy poverty.

The toolkit can be used to create an energy poverty roadmap, where certain measures can be implemented in different areas to reduce energy poverty nationwide.

Upgrade Measure	No. of Homes	Total Cost	Average Cost per Home	Total Grants Funded by SEAI	Average SEAI Grant per Home	Average Net Cost per Home
Air to Water Heat Pump	13,309	€188,284,366.32	€14,147.09	€85,844,029.14	€6,450.05	€7,697.04
Air to Air Heat Pump	1,943	€29,149,510.23	€15,000.00	€6,801,552.39	€3,500.00	€11,500.00
Solar Panel	22,378	€174,677,609.03	€7,805.85	€37,871,414.45	€1,692.37	€6,113.48
Total Homes Upgraded	25,621	€392,111,485.58	€15,304.37	€130,516,995.98	€5,094.16	€10,210.20

Figure 4: Estimated Project Cost for a selected Small Area

Applying heat pump and solar panel upgrades to every eligible home in Co. Cavan saves the average household an estimated €1,574 a year, reduces energy poverty across those homes from 15.2% to 9.7%, and cuts their carbon emissions by over 40%. The same analysis can be run for any local authority, Sustainable Energy Community or Electoral Division in the country.

Conclusion

Energy poverty in Ireland is not a diffuse problem. It affects an estimated 211,000 households, and its most severe form is heavily concentrated: 67 Small Areas where more than 85% of households are in energy poverty, marked by unemployment at twice the national rate, double the disability rate, an older population and the least efficient

housing in the country. Age, ill health and low-income cluster together, and they cluster in homes that need the most fuel to stay warm.

Government has responded on two fronts, and both are doing real work. Income supports reach far more households, far faster: over 3.2 million payments in 2024 at a cost of €1.3 billion. They are the only tool that helps a household in energy poverty this week, and modelling shows they genuinely move the numbers, the Electricity Credit alone cut standard energy poverty from 11.5% to 9.2%.

But they leave the home exactly as inefficient as they found it and fail to address the issue on a longer-term basis. As Ireland depends on imported oil and gas, the next price shock lands on the same households, and supports cannot respond until the next Budget. Under an adverse scenario in which electricity costs rise a further 17.3%, holding bills at 2020 levels would cost €1.5 billion a year through the Electricity Credit, or €937 million through benchmarked Fuel Allowance and Household Benefits Package.

Home energy upgrades reverse that arithmetic. At an average €6,400 in public funding, an upgrade costs roughly five years of Fuel Allowance and is paid once. Deep retrofits can cut a home's energy use by around 50%, permanently lowering bills, insulating households from future shocks, and cutting emissions towards Ireland's 2030 targets. Prime19's analysis finds solar panels the single most effective measure nationally with a 5.32% reduction in energy poverty, driven by their applicability to 71% of homes. This is followed by wall insulation, and window upgrades close behind, and measures that prepare the home for additional energy efficient upgrades which by making a home eligible for a heat pump.

The Energy Poverty Toolkit turns this into a targeting exercise rather than a national average. It identifies where each measure will have the most positive impact, at local authority, Sustainable Energy Community or Electoral Division level. For example, in Co. Cavan, applying heat pumps and solar panels to every eligible home would save the average household €1,574 a year, cut energy poverty across those homes from 15.2% to 9.7%, and reduce their carbon emissions by over 40%.

The conclusion is not that one approach should replace the other. Income supports are the immediate response and will remain necessary while inefficient homes remain. However, our analysis has shown that energy efficiency upgrades are an intervention that has to be paid for once, and which addresses the underlying problem at source.