VINCENTIAN MESL RESEARCH CENTRE

The cost of adequately heating the home

Executive Summary

Working Paper | Niamh O'Carroll | Nov 2023

Abstract

This Working Paper examines the cost of household energy over the recent period of high energy inflation using the Minimum Essential Standard of Living (MESL) data and demonstrates the impact of dwelling efficiency and method of purchase on these costs.

Energy poverty typically results from the interaction of three key factors, namely, the energy efficiency of a dwelling, the cost of household energy, and household income. To demonstrate the influence and interplay of these factors, this paper identifies the minimum energy need for four household types, calculating the variation in cost by level of dwelling efficiency and method of purchase. This paper examines the potential burden of energy poverty for the household types in social welfare and national minimum wage scenarios. The analysis presents these findings in the context of the overall MESL expenditure need and household income for each household type.

The value of current energy-related income supports, and other social welfare payments has been eroded over the current inflationary period. This paper highlights the fixed nature of Fuel Allowance and the Household Benefits Package and sets out the case for an alternative policy approach that is more responsive to households' minimum energy need by taking account of dwelling efficiency and any price volatility in the energy market.

Background

Over the past two years, there has been an exceptional surge in energy prices, increasing household energy costs to unprecedented levels. In the 2023 MESL, urban households increased by an average of 67.8%, while rural households increased by an average of 6.2%. Cumulatively, from March 2020 to March 2023, the MESL Household Energy increased by 117.1% for urban households and by 75.8% for rural households. Urban heating costs (based on the use of natural gas) have increased by an average of 92.7% in the MESL baskets, while rural heating costs (based on the use of home heating oil) have decreased by an average of 12.8%.

The Government's recent Energy Poverty Action Plan defines energy poverty as:

> "… an inability to heat or power a home adequately"
> (Department of the Environment Climate and Communications, 2022:6).

The Action Plan cites household energy needs costing more than 10% of net household income as a long-standing measurement of energy poverty in Ireland. In the 2023 MESL, an analysis of estimated household energy costs as a percentage of social welfare income for four household types, from 2020-2023, found that each household type will have been pushed into energy poverty, needing to spend more than 10% of their net income to meet minimum energy needs.

This Working Paper aims to further investigate the impact of the acute rise in energy costs for these four household types in the context of the Minimum Essential Standard of Living.

Calculating Minimum Energy Need

Energy poverty typically results from the interaction of three key factors, namely, the energy efficiency of a dwelling, the cost of household energy, and household income. To demonstrate the influence and interplay of these factors, the paper identifies the minimum energy need for four household types, calculating the variation in cost by level of dwelling efficiency and method of purchase. The paper examines the burden of potential energy poverty for the household types in social welfare (SW) and national minimum wage (NMW) scenarios. The four household types examined are outlined below:

- SA Working age single adult
- TP Two parents with two children (pre-school & primary school ages)
- OP One parent with two children (primary school & secondary school ages)
- SA Older Older single adult

The paper uses data from the SEAI on estimates of the energy needed for adequately heating dwelling types based on the Building Energy Rating or BER band. The electricity portion of the minimum energy need is based on existing MESL data.

The paper focuses on urban household energy costs (gas is the standard fuel used in the urban MESL baskets). Because of the current price volatility of different fuel types, one rural scenario is examined, where it is assumed that home heating oil is used. The differential in cost by payment method used (bundled/direct debit contracts versus pay-as-you-go energy) to access household energy is detailed, with regards to identifying the presence of the poverty premium in the Irish energy market.

The Working Paper provides a detailed discussion on the risk and depth of potential energy poverty for each household type and income scenario, using the following three thresholds to measure levels of energy poverty:

Core	10% Threshold	A household is considered to be experiencing '**core**' energy poverty when it spends more than 10% of its net income on household energy.
Severe	15% Threshold	A household is considered to be experiencing '**severe**' energy poverty when it spends more than 15% of its net income on household energy.
Extreme	20% Threshold	A household is considered to be experiencing '**extreme**' energy poverty when it spends more than 20% of its net income on household energy.

Key Findings

The minimum energy expenditure need as a percentage of net household income by household type, income scenario, payment method and dwelling efficiency level is presented below and is colour coded to reflect the three thresholds of energy poverty.

Household	Scenario		E1-E2	D1-D2	C2-C3	C2	B3-C1	A1-B2
SA	SW	PAYG	28.2%	24.2%	21.3%	20.1%	19.0%	16.5%
TP	SW	PAYG	23.0%	19.1%	16.4%	14.9%	14.4%	10.7%
OP	SW	PAYG	28.9%	24.0%	20.6%	18.8%	18.2%	13.6%
SA Older	U	PAYG	57.1%	44.2%	35.3%	30.4%	28.7%	16.6%
SA Older	R	PAYG	37.9%	29.4%	23.9%	21.3%	20.0%	14.0%
SA	SW	Bundle	23.4%	19.8%	17.2%	16.1%	15.1%	12.8%
TP	SW	Bundle	19.3%	16.1%	13.8%	12.6%	12.2%	9.1%
OP	SW	Bundle	24.3%	20.3%	17.5%	15.9%	15.4%	11.6%
SA Older	U	Bundle	48.3%	37.2%	29.5%	25.2%	23.8%	13.3%
SA Older	R	DD	36.0%	27.6%	22.1%	19.5%	18.1%	12.1%
SA	NMW	PAYG	15.7%	13.5%	11.9%	11.2%	10.6%	9.2%
TP	NMW	PAYG	18.4%	15.3%	13.1%	11.9%	11.5%	8.6%
OP	NMW	PAYG	17.4%	14.5%	12.4%	11.3%	10.9%	8.2%
SA	NMW	Bundle	13.0%	11.0%	9.6%	9.0%	8.4%	7.1%
TP	NMW	Bundle	15.5%	12.9%	11.1%	10.1%	9.7%	7.3%
OP	NMW	Bundle	14.6%	12.2%	10.5%	9.6%	9.3%	7.0%

In total, 96 cases are examined. 83 of the 96 cases demonstrate some level of energy poverty. Of the 83 cases of energy poverty:

- 31 are in core energy poverty
- 24 are in severe energy poverty
- 28 are in extreme energy poverty
    - 17 of these are in the case of the older single adult household type with an enhanced heating schedule
- In seven of the 13 cases not in energy poverty, the minimum energy expenditure need is over 9.0% of net household income, leaving the household at risk of entering energy poverty if energy prices continue to rise
- Social welfare dependent scenarios demonstrate the greatest prevalence and severity of energy poverty:
    - 59 of the 60 social welfare dependant scenarios demonstrate some level of energy poverty where at least 10% of net household income is spent on household energy

    - Almost half (28) of the social welfare cases demonstrate extreme energy poverty, where energy expenditure need is greater than 20% of net household income
    - In the social welfare income scenarios, the household types do not have an adequate income to meet the cost of a Minimum Essential Standard of Living
- Energy poverty is more prevalent and a greater burden when purchasing minimum energy needs by pay-as-you-go
- As dwelling efficiency improves, energy costs are reduced, and in turn, the degree of energy poverty lessens. However, given the exceptional increase in energy prices, the minimum expenditure energy need is still so great that energy poverty persists in a number of these cases.

Energy-Related Income Supports

Fuel Allowance and Household Benefits Package are the two primary social welfare supports for supporting household with home energy costs. Failing to increase the base rates of Fuel Allowance and Household Benefits Package in line with rising energy costs has eroded the real value of the flat-rate payments. Moreover, the findings in the Working Paper highlight that the two supports do not respond to the complex variation of minimum energy need across household types or price fluctuations in the energy market.

Given the variation of energy needs across different household types, the current price volatility of different fuel types, and the complexity of the energy market itself, there is a need to re-examine whether the fixed nature of Fuel Allowance and Household Benefits Package remains fit for purpose. An alternative approach that reflects the energy needs of individual households would support households to manage their expenditure and meet their minimum energy need. The Working Paper sets out the case for an alternative policy approach in the form of an Energy Guarantee type scheme, which responds to variation in energy need by dwelling efficiency level and price volatility in the energy market, for households at risk of energy poverty.

Energy Guarantee

The aim of the proposed Energy Guarantee is to ensure that the level of support helps households to meet their minimum energy need at a low cost. The proposed approach guarantees that a minimum quantity of energy can be secured through a credit, replacing current energy-related income supports. The value of the credit is determined by a range of factors including household income and household energy need (primarily indicated by the dwelling BER band).

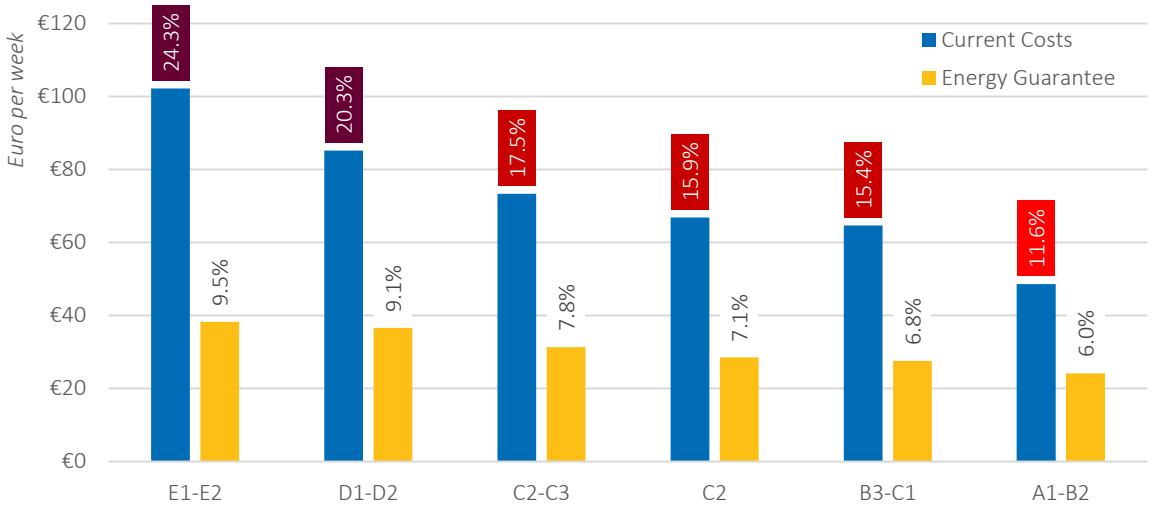
While there is a lack of data regarding the energy efficiency of Ireland's housing stock, and there is currently no way of estimating the BER of homes without a certificate, the SEAI's Fully Funded Energy Upgrades Scheme provides means for social welfare dependent and vulnerable households to obtain a free BER assessment, at no cost to the applicant. In order to be considered eligible for a free energy upgrade, the applicant must be in receipt of a qualifying social welfare payments, including the One-Parent Family Payment, the Working Family Payment, or significantly, Fuel Allowance.

The proposed Energy Guarantee could therefore work alongside the SEAI scheme, providing a greater level of support to households that are awaiting a free energy upgrade, and tapering once the energy upgrade is achieved.

The proposed system guarantees that 60% of the minimum energy need, relating solely to unit costs, is met. The approach is primarily linked to dwelling efficiency so that a greater level of support is provided to households living in dwellings with a low BER. The issue of low-income is also considered by ensuring that minimum energy expenditure need is no more than 9.5% of net income. A limit is also applied, the proposed support will not reduce energy costs to less than 6.0% of net household income. In this way the support will taper, in line with a reduction in household energy costs (due to a higher level of efficiency and/or reducing prices) and/or increases in net household income.

The proposed Energy Guarantee is modelled in the Working Paper for the one parent household type and the older single adult household type, see pages 36 - 43. An example of the potential effect of the proposed model on net household energy costs for the One Parent household type, is illustrated below.

Graph 1 One Parent & Two Child household type, average weekly household energy costs



It is important to note the limitations of the proposed approach. The estimates offered in the Working Paper are based on the minimum energy need, or what a household should need to adequately heat and power the home. Energy consumption in the real-world will likely vary and should be considered when interpreting the estimates offered in the paper. Additionally, while the model relies on an expenditure-based method to eliminate energy poverty, it does not provide any additional support where income inadequacy persists. Therefore, it does not take account of where a household may choose to go without essential items such as food or adequate warmth.

Eligibility for the proposed Energy Guarantee model would need to be given careful consideration. Current eligibility criteria for Fuel Allowance are highly targeted in nature, excluding several low-income households that are at risk of energy poverty including those recently unemployed and Working Family Payment recipients. As demonstrated by the findings in the Working Paper, these household types are vulnerable to energy poverty and are at risk of being unable to access essential energy. The question of whether all households in receipt of social welfare supports, including those engaged in low-paid employment and those in receipt of Working Family Payment, needs to be investigated further.

Conclusion

While improving dwelling efficiency is integral to preventing energy poverty, in the context of inadequate income, it will not enable a low-income household to meet its minimum energy need. The findings show that all social welfare dependent households, with the exception of one, indicate energy poverty even when a high level of efficiency is reached (A1-B2). Each of these household types continue to face inadequate incomes, demonstrating that income supports are inadequate to meet both energy need and overall expenditure need. Therefore, it is vital that policy addresses both dwelling efficiency and income adequacy in its approach to tackling energy poverty.

The value of current energy-related income supports, and other social welfare payments has been eroded over the current inflationary period. The Working Paper highlights the fixed nature of Fuel Allowance and the Household Benefits Package and sets out the case for an alternative policy approach in the form of an Energy Guarantee, which is more responsive to households' minimum energy need. Further research is required to explore alternative policy measures such as an Energy Guarantee to support vulnerable households to access essential energy.

The full Working Paper is available at:

budgeting.ie/publications/the-cost-of-adequately-heating-the-home/

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Vincentian MESL Research Centre at SVP

Society of St Vincent de Paul,
SVP House,
91-92 Sean MacDermott Street,
Dublin 1, D01 WV38,

www.budgeting.ie

mesl@svp.ie

CHY 6892 | RCN 20013806

This project was supported by the Department of Social Protection as part of its agreement for funding the Vincentian MESL Research Centre at SVP. The Research Centre is solely responsible for the views, opinions, findings, conclusions, and recommendations expressed in the report and for the accuracy of the report.

The contents of the report are not attributable to the Minister for Social Protection or the Department of Social Protection.