

Policy Measures to Overcome Energy Poverty: An Assessment

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Abstract

This article explores the effectiveness of Spain's *bono social* and energy efficiency measures on reducing energy poverty. By combining income support with long-term energy-saving solutions, the study reveals a significant reduction in energy poverty, highlighting the need for a holistic approach to address both immediate and structural challenges in the energy transition.

The global energy transition is shifting economies towards cleaner, renewable energy sources to combat climate change. However, while this shift is crucial, it presents new challenges, particularly for vulnerable populations. One of these challenges is energy poverty—when households struggle to afford basic energy services such as heating, cooling, and lighting. In the European Union (EU), this issue affects more than 40 millions of people, a problem that has been exacerbated by rising energy prices, socioeconomic disparities, and the ongoing energy transition (https://energy.ec.europa.eu/system/files/2023-10/SWD_2023_647_F1_OTHER_STAFF_WORKING_PAPER_EN_V5_P1_3016190.PDF).

In Spain, a nation with a strong push towards sustainability, the government has implemented two key policies to combat energy poverty: the *bono social*, which provides income transfers for energy bills, and energy efficiency measures that aim to reduce consumption through retrofitting homes. This article highlights the findings of a recent study (see [Jové-Llopis & Trujillo-Baute, 2024](#)) that evaluates these policies' effectiveness and provides insights into how governments can design better interventions to lift households out of energy poverty.

Understanding Energy Poverty in the European Context

Energy poverty is a multi-dimensional issue, driven by a complex interplay between income, energy prices, and household energy efficiency. While income support offers immediate financial relief to vulnerable families, it is often considered a short-term solution. On the other hand, energy efficiency measures promise a long-term reduction in energy consumption, potentially reducing the energy burden for households.

Spain has introduced both types of policies: the *bono social*, offering direct

subsidies on electricity and heating bills for low-income households, and the Building Energy Rehabilitation Program (PREE), which provides support for improving energy efficiency in homes through retrofitting. Despite these efforts, energy poverty remains a persistent problem in the country, with around 10% of households estimated to be in energy poverty before policy interventions.

Policy Evaluation: Income Transfers vs. Energy Efficiency

The study evaluated the effectiveness of these two approaches by simulating their impact on Spanish households. The findings show that both policies can significantly reduce energy poverty, but their effectiveness varies (Figure 1).

1. Bono Social (Income Transfers):

—The *bono social* has the potential to help lift 9% of energy-poor households out of poverty. However, this impact is relatively modest, as it only addresses the affordability side of the problem.

—The study shows that this income support, while crucial, does not tackle the underlying issue of high energy consumption in inefficient homes, limiting its overall effectiveness.

2. Energy Efficiency Measures:

—Retrofitting homes with energy-saving technologies can potentially lift 64% of energy-poor households out of poverty. Improvements to thermal insulation, heating

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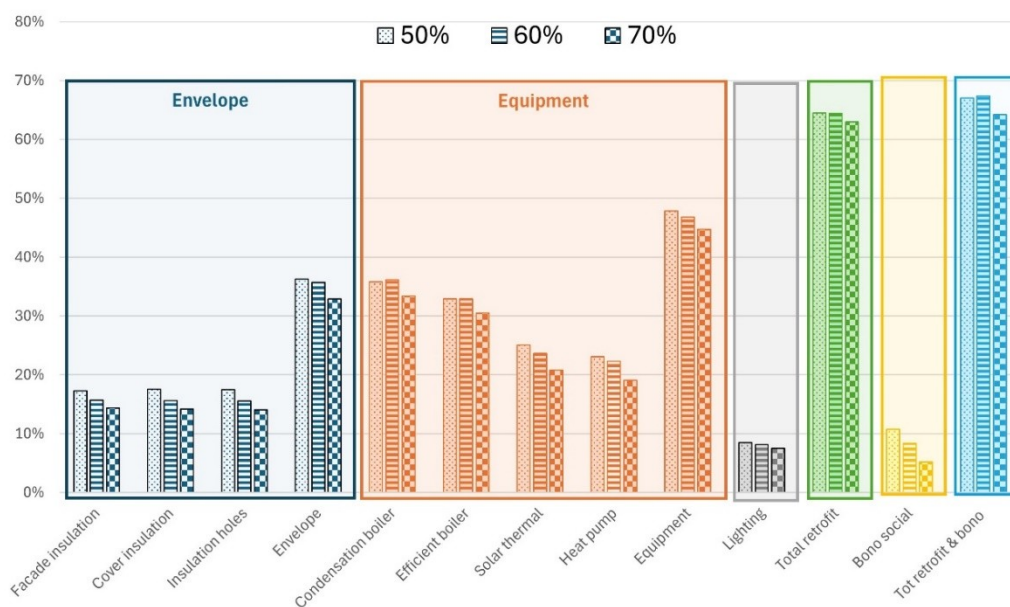


Figure 1: Households escaped from energy poverty after policies (% with different Low Income High Costs thresholds)

systems, and lighting can lead to significant savings in energy bills.

—These measures, though more costly upfront, offer a long-term solution by reducing energy consumption and making homes more resilient to fluctuations in energy prices.

(For a more detailed comparison of these interventions, refer to the full study on energy poverty policy effectiveness in Spain ([Jové-Llopis & Trujillo-Baute, 2024](#)))

The Power of Combining Policies

The most significant insight from the study is that combining income support with energy efficiency measures yields the greatest results. When both policies are implemented together, the reduction in energy poverty rises to 67.4%, as more households can benefit from both reduced energy bills and lower energy consumption.

However, the study also reveals a critical point: the incremental benefit of adding income transfers to households that have already undergone total retrofits is marginal. This suggests that energy efficiency should be prioritized as the more sustainable, long-term solution, with income transfers acting as a complementary measure to provide immediate relief in the interim. Nevertheless, it is important to recognize that the major challenge lies in ensuring that energy efficiency policies are affordable for the most vulnerable populations.

Policy Recommendations for a Just Energy Transition

This analysis has important implications for policymakers seeking to achieve a just energy transition. As governments design policies to reduce energy poverty, they must consider the long-term sustainability of their interventions:

1. Prioritize Energy Efficiency:

Energy efficiency improvements—such as retrofitting homes—offer the greatest potential to lift households out of energy poverty in the long run. Policymakers should increase funding and streamline access to these programs, particularly for low-income families who may face financial and bureaucratic barriers to participation.

2. Maintain Income Support:

While energy efficiency should be prioritized, income transfers remain crucial for addressing immediate needs. The *bono social* has proven effective in providing short-term relief, but policymakers should focus on simplifying

the application process and raising awareness to ensure that all eligible households benefit.

3. Adopt a Holistic Approach:

Energy poverty is not just about reducing energy bills; it's about improving the overall quality of life for vulnerable populations. Governments must address behavioral barriers, such as awareness and understanding of energy-saving practices, alongside technical solutions like retrofitting.

Looking Ahead: Challenges and Opportunities

The findings from Spain can serve as a blueprint for other European countries facing similar challenges. As the EU pushes forward with its Green Deal and energy transition targets, policymakers must recognize that a one-size-fits-all approach will not work. Each country must tailor its interventions to address the specific needs of its population, combining short-term financial support with long-term structural improvements.

One potential obstacle is the rebound effect, where households that receive energy efficiency upgrades might increase their energy consumption, negating some of the benefits. To mitigate this, policies must include behavioral interventions that encourage households to adopt more sustainable energy practices.

Ultimately, tackling energy poverty requires multidimensional solutions that go beyond immediate financial relief. By integrating energy efficiency with targeted income support, governments can not only reduce energy poverty but also improve public health, increase energy security, and contribute to climate change mitigation.

Conclusion

The energy transition is not just about switching to renewable energy sources; it's about ensuring that all citizens can access affordable and reliable energy. Spain's approach to energy poverty—combining income transfers with energy efficiency improvements—offers valuable lessons for other nations. As we move towards a cleaner, more sustainable future, it is crucial to ensure that no one is left behind, and that energy policies are designed to benefit the most vulnerable in society.

For further reading on energy poverty policies and their impacts, visit the IAEE Energy Forum for more insights and research updates.

This article summarizes the key insights from the study while keeping the content accessible and engaging for the broader audience of the Energy Forum.