

Energy-efficiency and environmental policies & income supplements in the UK: Their evolution and distributional impact in relation to domestic energy bills

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The objective of this paper is to study the direct costs of major energy-efficiency and environmental policies that have affected domestic electricity and gas bills in the UK over a period of 12 years. It is also a first attempt to understand the current distributional impact of these policies and others that act as income supplements resulting in a net decrease in the burden of paying higher energy bills for the beneficiaries. Ultimately, the aim is to allow equity implications of current policies to guide future policy makers in restoring consumers' trust in the energy market and protecting low-income households from paying higher energy bills.

Motivation for this study lies in the fact that the existing literature on the cost burden of UK's energy-policy mix is limited. Also, the misleading presentation (some of it unintentional) of the statistics that are available has added much to consumers' concerns. In a recent paper, Renewable Energy Forum Ltd. (2012) has expressed doubts whether DECC should even be evaluating the success of its own policies. Hence, in compiling data from various sources and organisations, this study attempts to present a consistent picture across time and income deciles.

The paper focuses on two distinct set of policies, namely, energy-efficiency and environmental policies (CERT et al., CESP, EU ETS, FiTs, RO and WFS), and energy income supplement schemes (CWP, WHD and WFP). The former set includes policies that directly affect domestic energy bills through improved domestic thermal efficiency and/or increased energy prices. On the other hand, income supplement schemes help relieve their recipients of the financial burden imposed by energy-efficiency and environmental policies. It is important to note that only the financial costs of these policies are examined and not their impact on energy-efficiency or environmental emissions.

Figures suggest that between 2000 and 2011, typical domestic electricity and gas bills had on an average increased in real terms by 32.9% and 84%, respectively. Simultaneously, the percentage share of policy costs in them had increased by 14% and 4%, respectively. This reflects a growing share of policy costs in bills which is relatively small for gas customers

but significant for electricity customers, thereby, distorting consumption choices between the two.

The current understanding of distributional impacts is marred by a lack of reliable data. There exists no single publically-available dataset that compiles information on the distribution of energy consumption, energy requirements, energy tariffs, energy measures delivered (by policy or self-funded) and recipients of energy income supplements for households across different income deciles (Roberts et al., 2007). Nevertheless, numbers highlight the issue of imperfect-targeting of low-income households by the energy-policy mix during 2009-10.

The study also indicates that total policy budgets under different schemes have evolved greatly over time. The total nominal expenditure incurred under the entire policy mix (excluding VAT and duties on electricity and gas) has evolved from £1.9 billion in 2000-01 to £ 7.5 billion in 2010-11. Examining this more carefully, we see that during 2010-11, the combined (nominal) budget under the schemes that deliver energy-efficiency measures (CERT et al., CESP, FiTs and WFS) was around £1552.4 million. This was less than half the total (nominal) budget under the income supplement schemes for that year.

Moreover, of this pot of funding for energy-efficiency schemes, 76% of the resources were handled by energy suppliers. With the launch of Green Deal and ECO as well as shutting down of WFS in the near future, reliance on energy suppliers to collect and manage funds will only increase (Sunderland and Croft, 2011). If it is understood that long-term solutions to fuel-poverty can be mainly provided by improving domestic thermal efficiency then there are serious concerns to the amount of resources being allocated for the schemes and the ways in which they are collected.

With high volumes of public money being spent to achieve environmental objectives, it is important to realise that there are still a number of ‘unknowns’ in this line of research for any definitive conclusions to be drawn. Devoid of any knowledge on how energy suppliers charge policy costs to their customers, DECC’s assessment of future policy costs lacks empirical grounding. There is a greater call to understand why there are significant differences in the presentation of official statistics on energy bills and how can one compare between them. In time, a better understanding of the distributional impacts of current energy policies would facilitate in developing more equitable policies in the future keeping in mind our environmental commitments.