

### Policy concerns raised by decarbonising the UK energy industry

By Akul Dayal



#### Research Question:

*What policy mechanisms could allow the costs and benefits of the transition to ZCB to be fairly shared in a way that maintains access for all to a level of energy services required for a good standard of living?*

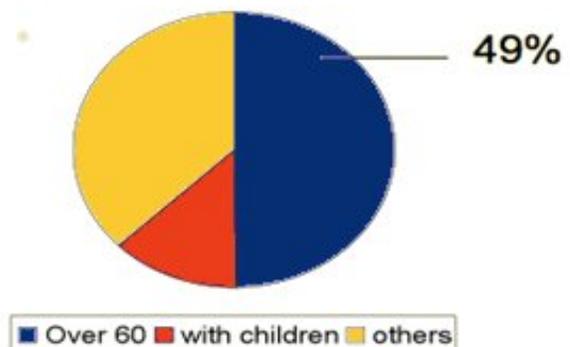
#### Summary

- Ambiguous and varied identification criterion for fuel poor households
  - UK subsidises all pensioners; uses only household income metric
- Local government/municipal based solutions
  - Channel subsidy money to fuel-poor community municipal bodies
  - Behaviour change mechanisms
- Long-term macro-scale policy alternative
  - Introduce personal carbon allowances mechanism to redistribute the energy costs

#### Introduction

As climate change becomes a more pressing concern, a complete overhaul of the energy sector across the world seems inevitable. This transition would involve not only the establishment of costly alternative energy plants like nuclear and offshore wind but it would also entail a shift towards more efficient end user appliances like electric space heaters, better refrigerators etc. All this translates to an increased energy bill for UK's public. It becomes the government's responsibility to shelter the fuel poor from this forthcoming price burden.

#### Fuel poor households



#### Pensioner households

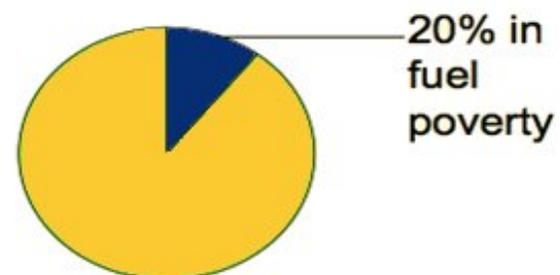


Figure 1: England 2007 Statistics; Source: Brenda Boardman 2013

### 1. Identification of fuel poor households

Not just Britain but most countries seem to be failing to identify the fuel poor households, leading to costly subsidies reaching the wrong people. Currently, the UK gives a winter fuel subsidy to all pensioners regardless of their incomes and savings. Figure 1 brings home the inefficacy of this subsidy. Fuel poor households in the UK are defined as those that spend more than 10% of their household income on energy services. Moore 2012 cogently argues that there is ample confusion regarding whether UK Fuel Poverty Strategy is targeted at households least able to afford their fuel costs or at those at risk from excess winter and summer mortality and morbidity.

Although fuel poverty has a high correlation with low incomes (DECC Fuel Poverty Statistics 2011), it is felt that the targeting can be more effective if another constraint is added to the definition. Berr and Defra 2008 in the UK Fuel Poverty Strategy Report show how 10% income proportion definition can be combined with low energy efficiency households to more accurately identify the fuel poor citizens of UK.

### 2. Local government solutions

As argued by Brenda Boardman 2007, it might prove beneficial to distribute the fuel poverty subsidies to those municipal bodies whose communities shelter the maximum proportion of fuel poor citizens. Setting up of 'low carbon zones' by such municipal bodies would be geared towards severely restricting fuel poverty through local government funded improvements to the building envelope, solid wall insulation, community-owned solar hot water, photovoltaic and combined heat and power. Such community-based efforts help families avoid the social stigma of belonging to a fuel poor household.

### 3. Behaviour Change Measures

Figure 2 classifies the various types of energy consumers. It is found that a lot of fuel poor households fall into the passive ratepayer category and actually pay a much higher rate for their energy. The government and local community organisations should undertake more awareness programs to empower fuel poor households to take full advantage of the highly competitive energy industry in UK. Community based efforts might also give such households the strength of collective bargaining.

### 4. Macro-scale country wide efforts

Although it might prove to be a logistical and administrative nightmare to assign personal carbon allowances to each citizen, it is felt that it is the one of the few central level policy decision that can tackle not just the fuel poverty issue but a lot of climate change mitigation issues: issues like luxury emissions, cross-boundary aircraft emissions etc. could be solved by this approach. Surplus allowances can be traded between the fuel rich and fuel poor. These allowances can be decreased slowly to match national emission targets for the UK.

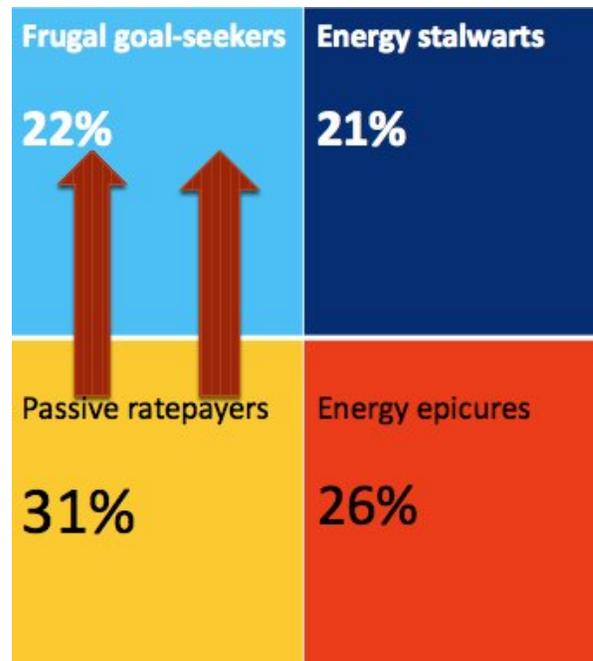


Figure 2 - Energy Consumer Classification; Source: Valocchi et al 2009

#### About the author:

Akul Dayal is a Rhodes Scholar from India and is pursuing a MSc in Environmental Change and Management at the University of Oxford. Akul's interests lie in the domain of corporate sustainability practices and renewable energy policy. Previously, he completed an undergraduate degree in Mechanical Engineering from Indian Institute of Technology Delhi and has interned with engineering companies in the US and Japan. Akul has also worked with various NGOs in the education, environmental and healthcare sectors in India.

## References

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Defra, London, Fuel Poverty Statistics Annex, section 6, p. 58; DECC, 2009, Section 7.2

Moore, R., 2012, Definitions of fuel poverty: Implications for policy. *Energy Policy*, **49**, pp. 19-26.

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## Additional Information

1. Low carbon strategy to reduce housing emissions in UK by 2050: Brenda Boardman:

[http://www.foe.co.uk/resource/reports/home\\_truths.pdf](http://www.foe.co.uk/resource/reports/home_truths.pdf)

2. Personal Carbon Allowances White Paper 2012, Carbon Trust.

[http://www.carbontrust.com/media/68490/personal\\_\\_carbon\\_allowances\\_white\\_paper.pdf](http://www.carbontrust.com/media/68490/personal__carbon_allowances_white_paper.pdf)