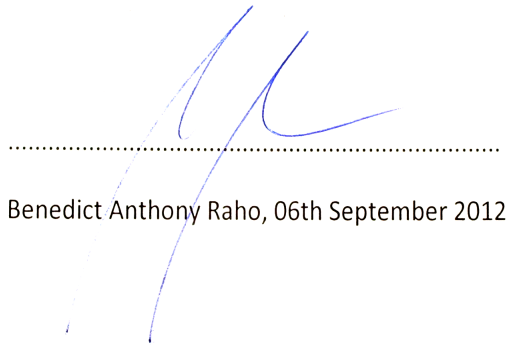
Fuel poverty related policy:
Lessons learned in the UK and other European countries and potentials and possible challenges for fuel poverty policy implementation in Austria.

Submitted by Benedict Anthony Raho
to the University of Exeter as a dissertation towards the degree of Master of Science by advanced study in Energy Policy
(September 2012)

I certify that all material in the dissertation which is not my own work has been identified with appropriate acknowledgement and references and I also certify no material is included for which a degree has previously been conferred upon me



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Benedict Anthony Raho, 06th September 2012

Acknowledgements

I would like start by thanking Dr. Bridget Woodman and Prof. Catherine Mitchell for their patience and guidance. They somehow manage to organise and teach a wonderful course, while at the same time never hesitate to find time for inquiries and problems.
I would also like to thank my fellow MSc Energy Policy students, who have been a constant source of joy and inspiration.
This dissertation, as well as the whole course, wouldn't have been possible without the continuing love, support and understanding by my family and my girlfriend Ingrid, for which I am eternally grateful.

I was also supported by the Austrian Institute for Sustainable Development. I would like do thank Dr. Anja Christanell and Mrs. Sylvia Mandl for their interest and feedback.

Last but not least I want to thank a number of academics and professionals who showed interest and took time from their busy lives to be available for my questions. Thank you, Dr. Francoise Barteaux, Thomas Berger, Prof. Brenda Boardman, Prof. Stefan Bouzarovski, Prof. Karl-Heinz Brunner, Ron Campbell, Dr. Ute Dubois, Aniol Esquerra Alsius, Alexander Machatschke, Mariella Müller, Georg Niedermühlbichler, Dr. Hans Steiner, Harriet Thompson, Sergio Tirado Herrero and Christina Veigl-Guthann

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1. Introduction

While the concept of fuel poverty is well established in the UK and the academic debate is relatively advanced, the recognition of fuel poverty as a distinct phenomena has only just begun in many European countries, including Austria. But recent rises in energy prices, as well as economic pressures on households have led to increasing interest in the issue and academic discussion of FP as a distinct social phenomena related to social policy, housing policy as well as energy policy.
The purpose of this dissertation is to identify characteristics and lessons learned from fuel poverty related policy in the UK and other European countries and apply them to the Austrian context. As the public and academic debate about fuel poverty and possible policy responses is still at a very early stage this dissertation is hoping to make a relevant contribution. Due to the limited scale this dissertation will not be able to present present comprehensive policy solutions, but will try to outline the main principles of what may constitute effective Austrian fuel poverty policy. In the ideal case it can be used as an starting point for more detailed research or as a first step toward policy measures.

After a short review of the literature on FP in the UK and the other relevant European countries, Chapter 3 will go into the details of fuel poverty policy. Chapter 4 will address fuel poverty policy in the UK, provide and analysis and summarise the lessons learned. The following Chapter will look at policy examples from other European countries, however in less detail. Chapter 6 will analyse the Austrian context and try to answer the question what lessons can be learned and applied. The last chapter will summarise conclusions.

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Glossary of Terms

CERT – Carbon Emissions Reduction Target

CESP – Community Energy Savings Programme

CWP – Cold Weather Payment

DECC – Department of Energy and Climate Change

DWP – Department of Work and Pensions

ECO – Energy Company Obligation

FP – Fuel poverty

WFP – Winter Fuel Payment

WHD – Warm Home Discount

WF – Warm Fron

WZ – Warm Zones

2. Methodology

This chapter will explain how this dissertation generated results and outline the methodological choices made.

2.1 Sampling – Selection of Countries

With the UK being forerunner in the academic debate, public recognition and policy output the UK is a logical choice for an analysis of fuel poverty related policy. The UK provides a variety of policies with certain differences in England/Wales, Scotland and Northern Ireland, however the latter two can only be covered marginally. Examples from other countries were harder to select as the public and academic debate is not nearly as advanced, and finding data and publications is a lot more challenging. This dissertation will discuss policy examples from the UK and to lesser extent France, Belgium, Spain.

2.2 Interviews

Available data and publications were supplemented by a number of interviews with either academics or established professionals working in relevant fields, as this was the most effective way of bridging gaps in the literature (especially outside the UK) and gain analytical insight. These interviews were held face-to-face or via telephone / Skype.

2.3 Policy Analysis and Evaluation

There are countless different methods and approaches to policy analysis, depending on various factors such as the definition of what constitutes policy itself, definitions of the state and the political system, theoretical and normative perspectives as well as practical needs and required outcome of the analysis. Knoepfel (2007) – based on Meny and Thoenig (1989) and Muller (1990) – identifies three basic schools of policy analysis:

(1) Policy analysis based on theories of the state and the political system. Political analysis in this school aims to understand policy in context of the political system and its ideological and institutional framework (polity).

(2) Policy analysis based around how public action and the policy making process functions. The focus in this school lies in understanding and outlining strategies, actors and decision making

processes by identifying underlying factors and applying theoretical models to explain them.

(3) Policy analysis focused on evaluating policy and its effects.[1] These approaches are mainly concerned with practical, measurable results and outcomes rather than placing policies in theoretical, systemic or ideological contexts. Quantitative and Qualitative data and information is used to evaluate policies based on a set of criteria.

As this dissertation aims to answer questions about practical outcomes and lessons learned rather than identifying ideologies, polity structures, policy processes or the role of specific policy actors an approach based on the principles of this third category is certainly a prudent choice. However, it is important to understand that an evaluation based approach can not completely ignore polity settings, policy processes or the role of individual actors or interest groups when analysing the success, failure or impact of a policy. Also, as fuel poverty is an complex interdisciplinary issue a rigid focus only on pure policy evaluation without understanding contexts like the energy system and housing culture seems unsuitable.

Dunn (2012) suggests orienting analysis around six key factors/questions to determine how successful policy is:

- Effectiveness – *Has the valued outcome been achieved?*
- Efficiency – *How much effort was required to achieve what result?*
- Adequacy – *To what extent does the achieved outcome resolve the problem?*
- Equity – *How are costs and benefits of policies distributed among different groups?*
- Responsiveness – *To what extent does the policy satisfy needs, preferences or values of different groups?*
- Appropriateness – *How important are desired outcomes?*

Dunn stresses the fact that the relevance of these factors will vary depending on policy area and has to be understood as guideline rather than a rigid set of rules. Such a grounded, but flexible approach seems most prudent when analysing FP policy, as it is complex and multidisciplinary. This dissertation will integrate these core questions into a methodology of identifying and analysing what the literature identifies as key factors for determining the success of fuel poverty related policy (Hills 2012, Boardman 2010) These factors will be discussed in more detail in chapter 4.

- Policy goal
- Targeting

[1] A distinction must be made between policy evaluation as a method on the one hand and the analysis of evaluation processes as part of the policy cycle on the other.

- Policy type
- Funding scale
- Funding source

Additionally this dissertation will suggest and (partially) apply certain terminology for different types of fuel poverty policy. The term *fuel poverty related policy* will be used to avoid confusion which may arise from analysing different countries with different policies labelled differently. This will also be discussed in chapter 4.

2.4 Limitations and Weaknesses

There are obvious limitations to any academic work that tries to cover several different countries, with different policy histories, (energy) economies, infrastructures and polity settings. The fact that the countries have varying degrees of political recognitions of FP thus labelling policy differently further complicates identifying lessons learned. The selection of the case studies was influenced by limitations in word count, the restricting time frame, as well as the varying accessibility of academic literature, available interview partners and language barriers, rather than a careful pan-European attempt to hand pick policy examples. This means that the level of detail, size or quality of the sample does in no way represent research appropriate of the importance of and the authors interest in the issue.

This dissertation will only be able to touch the surface of many aspects of the issue, such as defining FP, national differences in housing stock, energy system, proxies for policy targeting, the actual policy making processes or responses and possible strategies on a EU level.

In some cases policies analysed are not particularly old and it may hard to evaluate them in detail, not only because it may be to early to make statements about impacts, but also because available data and literature may be limited.

Also, the attempt of applying lessons learned for a possible policy response is severely hampered by the complexities of policy making. While it is hard enough analyse policy and identify lessons learned in different European countries, trying to mould this into an valuable insight for another country is even more challenging. At the same time, suggestions and conclusions made for the Austrian context may prove completely irrelevant due to a change of government and a shift in policy, new binding EU legislation or economic developments that could have a strong influence on causes of FP like household income or energy prices.

3. Literature review and overview of the academic debate

This chapter will offer an overview over fuel poverty publications and the academic debate to put this dissertation into its research context. As fuel poverty is an interdisciplinary issue publications on related fields such as energy efficiency, housing, energy prices or poverty can be very relevant to the academic debate without specifically being written about FP. This problem becomes even more challenging when covering different European countries, where in some cases fuel poverty is not recognised and addressed as a distinct phenomena and if only few research efforts have been made. At the same time there may be many publications on related issues closely linked to FP.

3.1 Lit review fuel poverty in the UK

This part of the Lit-review will cover the most relevant publications on identifying, quantifying and defining FP, on the causes and on FP policy. This literature will be discussed in more detail in the following chapter. There is an substantial amount of literature on the (health) effects of FP (e.g. Baker 2001 or Lidell and Morris 2011) or on characteristics of FP certain regions or areas of the UK (e.g. NIE 2009, Morrison 2007), but covering these publications would go beyond the scale of the this dissertation.

3.1.1 Identifying, quantifying and defining fuel poverty

The issue of fuel poverty was first identified and discussed in British academia in the context of the energy crisis of the 70s. In this period the UK, still being used to the idea of cheap and abundant (domestic) energy, was painfully reminded how much prosperity depended on affordable energy and that much of the housing stock, was not well suited for a world of high energy prices. (Brandshaw and Hutten 1983, Obaldeston 1984).

While Isherwood and Hancock (1978) have been credited to have first described the phenomena (Lidell et al. 2012, Obaldeston 1984) further research by Obaldeston (1984) Brandshaw and Hutten (1983) were part of a first surge of interest in the issue. These publications also already address policy issues related to FP. Also, in the 1970s and 80s first NGOs dedicated to FP, such as the the National Energy Action (1981), Energy Action Scotland or the National Right to Fuel Campaign (1975) were formed.

With Brenda Boardmans dissertation (1988) *Economic, Social and Technical Considerations for Fuel Poverty Policy* and *Fuel Poverty: From Cold Homes to Affordable Warmth* (1991) the academic debate gained further momentum and started to have growing influence on policy makers.

Boardman introduced the definition of fuel poverty using a 10% household income spending threshold and identified the importance of capital investment for eradicating fuel poverty rather than just mitigating it. The question of defining fuel poverty was also discussed in *Defining the problem* Hunt and Boardman (1994) and Robertson and King (1995) – who coined the often repeated phrase "the scandal of fuel poverty".

In absence of an official definition of FP there were only estimates of the scale of the problem. However even if it was not acknowledged by policy makers, government publications such as the 1996 Energy Report (DOE 1996) based on the 1991 *English Housing Condition Survey* started to address the issue of "affordable warmth". (Boardman 2010) After the the official recognition of FP by the new labour government 1997 the 2001 Energy Report of the 1996 EHCS estimated a figure of 4.3 Million households being in FP (later corrected to 5.1 Million to be in line with the revised definition). Although this was the first official attempt of quantifying FP it seemed clear at this point that the amount of people affected had decreased during the course of the 90s.

Following the Fuel poverty strategy in 2001 DECC started publishing annual Fuel Poverty Progress Reports from 2003. These annual reports (last published 2009) provided an overview over policy measures and provided government figures, which showed an increase of the problem from a figure of about two million in 2003 to five million in 2008. The 2009 report stated that the main reason for this increase despite policy measures is rising energy prices. (DECC 2009) DECC also publishes an Annual Fuel Poverty Statistics Report (last published 2012) which in 2012 reported a slight decrease from 2009 to 2010 to a level of 3.5 Million due to a drop in energy prices.

A variety of NGOs such as NEA publish independent fuel poverty statistics. NEA estimated that the amount of households in the UK affected by FP has risen to around 7 Million. (NEA 2012)

Quantifying fuel poverty is closely linked to the definition. An early paper by Bradshaw and Hutton defined FP as *"Individuals, families and groups in the population can be said to be in fuel poverty when they lack the resources to obtain the reasonably warm and well lit homes which are customary, or at least widely encouraged or approved in the societies to which they belong"* (Bradshaw and Hutton, 1983, 250), this definition based on a definition of relative poverty by Thompson (1979). Later Brenda Boardman would define households in FP as *"unable to obtain an adequate level of energy services, particularly warmth, for 10 per cent of its income"* (Boardman 1991, 207) which would become the basis for the definition used for the UK Fuel Poverty Strategy.

Brenda Boardman's 10% household spending threshold has been intensely discussed for the last two decades: Healy and Clinch (2002) and Moore (2012) note that for this definition does not address other aspects of deprivation, Waddams-Price et al (2007) and Fahmy et al. (2011) note that a income

threshold is very different to what affected people actually perceive. *"Whatever operational definition and measurement approach is adopted, households who would need to spend more than 10% of their income on domestic fuel in order to maintain acceptable warmth in their dwellings are generally not the same households as those in fact reporting difficulty in doing so."* (Fahmy et. al. 2011, 4376). Todd and Steele (2006) note that Boardmans definition also does not take differences in culture and lifestyle into account. Stefan Bouzarovski summarises the debate about definitions in an interview for this dissertation: *"There are generally two approaches to measuring fuel poverty. One would be comparing a households spending with a cultural or economic norm. This is done for instance in the UK. The second approach is to determine a households perception of its ability to meet these norms."* (Interview Bouzarovski)

This debate about definitions is not only academic but has practical implications as it is not only closely related to the issue of quantifying, but also to effectively targeting people in order for a policy response to work. The question of the definition of FP was extensively discussed revision of UK fuel poverty policy by John Hills (2012). The result of this revision – which collected a vast amount of data and viewpoints from academics, NGOs and other stakeholders - were a preliminary report in late 2011 and a final report in Spring 2012. In this latter document usually referred to as the "Hills review" many of the already mentioned criticisms of the 10% threshold definition were taken into account and a new definition proposed. Hills proposes a definition of FP including a combination of both low income and high fuel costs (referred to as LIHC), arguing that such a definition would more accurately describe FP and allow policy to more effectively target households affected the most.

Although there was general approval of expanding the definition of FP, there also has been some criticisms. In a response to the Review Brenda Boardman praised the review as an *"important and useful analysis of the problem of fuel poverty"* (Interview Boardman) however pointed *"The old definition may have been too responsive to fuel prices, but the proposal is neither responsive to fuel prices, nor to improvements in energy efficiency. [...] In addition, the Review has not solved the over-riding challenge of identifying the fuel poor on the doorstep."* (Interview Boardman).

Especially the wording of "reasonable energy costs" in the Hills review attracted a lot of criticism from NGOs such as the End Fuel Poverty Coalition (EFPC 2012) and the Centre for Sustainble Energy (CSE 2012)

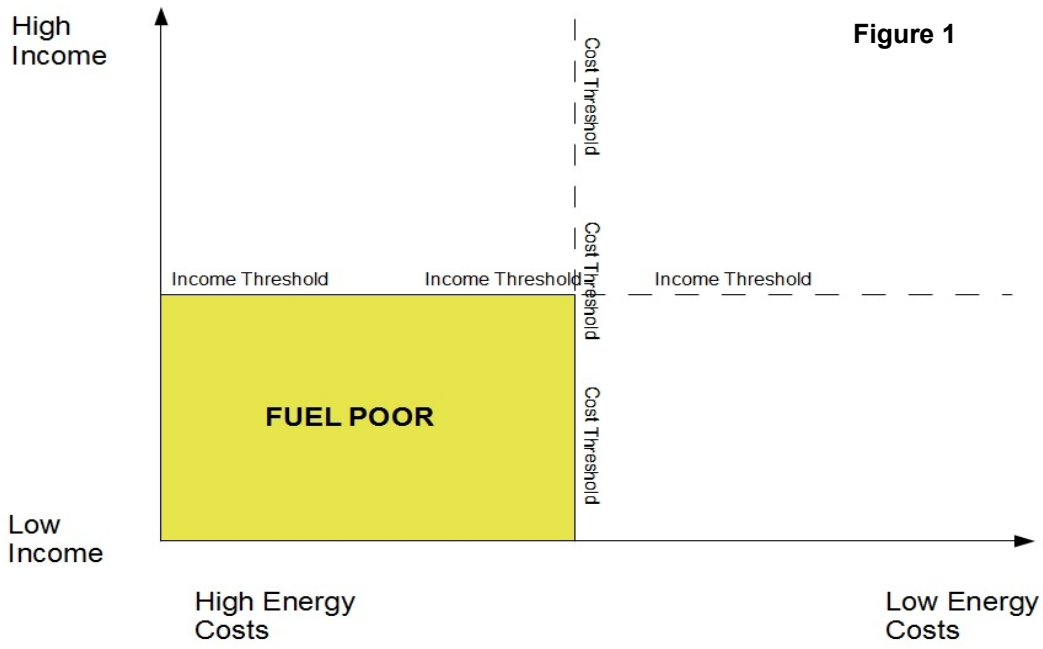


Figure 1

3.1.2 Causes for fuel poverty

A lot of the literature that has addressed the issues of defining and quantifying the FP also covered the underlying causes, as understanding these relates to creating effective policy. As the Hills points out a consensus has been established that fuel poverty is caused by a combination of three factors: (1) low income (2) high energy prices and (3) energy-inefficient housing (Hills 2011). Curiously however, this is either assumed to be self explanatory or established consensus and is stated without reference in virtually all publications from academics, public institutions (including the 2001 UK Fuel Poverty Strategy) or NGOs. (In several cases under-occupancy is also named as a distinct cause for FP, also lacking sources). A list of these three causes for FP was most likely first mentioned in Boardman (1991), but acknowledgement of these factors being responsible for fuel poverty dates back to the first publications on FP in the 70s and 80s.

In addition identifying causes for FP there is some debate how/if they differ in importance and what role they have. The relationship between income and FP has been intensely discussed, as this also has practical implications for fuel poverty policy. Boardman (2010) emphasises the strong correlation of low incomes and FP. But – depending on definitions – up to a third of households affected by fuel poverty are not on a low income while and at the same time some income poor households are not suffering from FP. Boardman also notes that this is extremely policy relevant as combating fuel poverty with a mere emphasis on income distribution would be both expensive and ineffective (apart from the fact that only capital investments can eradicate fuel poverty, rather than

just alleviating it). This position is supported by Palmer et al. (2008) who claim even if income poverty were eradicated there still would be fuel poverty. Hirsch et al. (2011) however comes to the conclusion that, overall, low income is a more important factor in fuel poverty than high energy consumption. A lot of this debate is not only focussed on how to define fuel poor, but also on the varying severity of FP, as measures toward higher income may be less effective for people in very inefficient housing. (Boardman 2010)

As already briefly discussed the early academic debate on FP was focussed on UK housing stock being inefficient and ill equipt for high energy costs, rather than low household income. (Brandshaw and Hutten 1983, Obaldeston 1984). Boardman emphasises the fact that the housing conditions in the UK are the pimary cause of fuel poverty and that it has to be adressed with capital investment, rather than treating it like a social issue with income related measures. (Boardman 1989, 1991, 2010, 2012)

The important point has to be made that this discussion on causes has been heavily focussed on the UK. As this dissertation will discuss the causes might be of different importance in a country that has a different housing stock of income situation.

3.1.3 Fuel poverty policy

This section will not discuss policy in detail (this will happen in the following chapter), but outline the academic and public debate surrounding it. First discussions of FP as a distinct phenomena were already combined with possible policy implications. Obaldeston (1984) and Brandshaw and Hutten (1983) argued that it is the responsibility of the state to take action as FP affects people that do not have the means to improve significantly improve their living conditions, and that they suffer the most from a liberalised energy market without policy intervention. Benda Boarman discussed policy in detail in her 1988 dissertation *Economic, Social and Technical Considerations for Fuel Poverty Policy* , in *Fuel Poverty: From Cold Homes to Affordable Warmth* (1991) as well as *Opportunities and Constraints Posed by Fuel Poverty on Policies to Reduce the Greenhouse Effect in Britain* (1993), and came to the conclusion that existing insulation grants and other energy efficiency measures do not help the fuel poor, as well as pointing out that carbon taxes could also prove to be an additional burden.

Brenda Boardmans *Fixing Fuel Poverty* (2010) and the already mentioned Hills review represent detailed analysis of UK fuel poverty policy. Boardman, reviews identifies several flaws in FP policy (see chapter 4) and makes suggestions on a possible future strategy. Hills, even if generally less critical, also identified several policy flaws which he mainly attributes to fuel poverty definition policy is based on.

Walker et al. (2012) also criticise the poor targeting by existing policy and point out that evidence strongly suggests that area-based, local approaches to tackling fuel poverty have been most successful: *"Thus far, area-based pilot schemes have been shown to be highly effective in capturing the fuel poor. In schemes such as 'Warm Zones', all households in a defined area are systematically tackled at the same time. Household needs are identified and appropriate solutions are applied through a holistic, partnership approach."* (Walker et al. 2012, 641). Other academics such as Boardman (2010), Rugkasa, et al. (2007) as well as organisations such as Consumer Focus Scotland (2010) and NEA (Interview Campbell) support this position, the main benefits of this approach being economies of scale, lack of stigma, possibility to use available local know-how and effectiveness targeting fuel poor. A recent paper by Boardman (2012) *Fuel poverty synthesis: Lessons learnt, actions needed* summarises many of the criticisms on UK fuel poverty and stresses the need for a comprehensive strategy.

As the UK functions as a role model for fuel poverty policy, academics from other European countries (and European projects involving UK NGOs and academics) have produced detailed analysis of UK fuel poverty. EPEE, a European research project conducted several studies on UK fuel poverty and in a collection of best practices around Europe it only mentioned the Warm Zones area based approach as successful (EPEE 2007).

3.2 Lit review fuel poverty in France

The academic and public debate on FP in France (referred to as *précarité énergétique*). started relatively late compared to the UK, however has advanced quite rapidly, with rising energy prices becoming an regular issue in the media from about 2004. In 2007 a network of academics called RAPPEL started addressing the issue and that same year the European EPEE published their reports (EPEE 2007a,b,c) giving first estimates of the scale and characteristics of the problem using a combination of EU-SILC data and national data. EPEE estimated that about 6% of households were suffering from FP, but one has to keep in mind they were lacking extensive data and a clear definition. A 2009 report by a government working group on sustainability and housing issues was the first French government publication addressing FP (Pelletier 2009) concluding FP was a severe problem, affecting 3.4 million households. The report also included a detailed analysis of existing policies related to FP, how effective they were and what policy makers could to to improve them.

RAPPEL have published a series of regular reports, which provide extensive data and, since the introduction of FP into French legislation are evaluating policy. (RAPELL 2010, 2011a, 2011b, 2012) According to RAPPEL in 2012 more that 3.8 million households (roughly 14.4% of the population) are in fuel poverty.

3.3 Lit review fuel poverty in Belgium

Like in France, FP has only recently become a debated issue. However, research suggests the problem might be as least as severe as in France. A Report by EPEE (2007d) estimated that about half the population in the lowest income third is unable to keep their households warm. It was also clear that a low quality of housing stock was a big issue in the case of this country.

Belgium still lacks any political recognition of FP as a distinct phenomena, but as was the case in France, rising energy prices and progressing academic debate in the UK and other countries led to increased academic interest. The first major study conducted by researchers two universities by Huybrechs et al. (2011), criticised the lack of comprehensive data and confirms EPEEs conclusions on the condition of Belgian housing stock. The report analysed existing policy related to FP and showed that not only is there a the lack of political awareness but also that the federal structure of Belgium is a significant obstacle for effective policy (Huybrechs 2011). Barteaux (2011) describes how there has been a shift in regional energy and insulation funding policy away from a public, progressive approach to one that is private, thus cheaper for the government but less beneficial for individuals affected - effectively increasing the burden on people in fuel poverty. *"Social rights are individualised and „personal efforts" are demanded in exchange of social help"* (Barteaux 2011, 7) An example of such policy is the drive toward pre-payment meters, which is heavily criticised. In other research she points out that the increasing public withdrawal from energy efficiency oriented retrofitting and renovation to a more market based approach, has not at all worked in favour of those affected. (Barteaux 2011)

3.4 Lit review fuel poverty in Spain

As with France and Belgium the EPEE (2007e) country report based on EU-SILC data was most likely the first major attempt to address FP in Spain. The report estimates that over 9% of Spanish households have severe difficulties paying energy bills, but other indicators of the quality of the housing stock (dampness, mold) hint that the problem may be more severe. Although like in most of Europe energy prices have increased recently, there is a surprising lack of serious academic discussion of FP, although the media and several NGOs have now picked up the issue. (Interview Esquerra, Interview Tirado) The Government has reacted by continuously downplaying the issue. (Interview Esquerra, Tirado 2012) Apart from smaller initiatives the only large scale research on fuel poverty has been a project named REPEX funded by the European Social Fund which produced a report in 2012. According to REPEX research around 10% of Spanish households were in FP in 2010, but it is likely that this number has increased due to the effects of the economic crisis. There are big regional differences, the coastal and southern regions being much less severely

affected.

3.5 Lit review fuel poverty in Austria

In Austria the public and academic debate on FP still only exists on a very limited in scale, But as in most other European countries, rising fuel prices combined with poverty issues becoming more pressing during the 2000s the awareness of FP has grown. (Brunner et. al. 2011a). However, Austria traditionally has a strong welfare state and there always has been public and political awareness of the link between energy issues and poverty. (Berger 2011)

The first research covering the issue was led by institutions that were generally interested in social issues such as CARITAS and the Austrian Chamber of Labour (AK). CARITAS published a pilot study together with E-Control (the energy market regulator) in 2009 in which FP is recognised as a distinct problem and the potential of free energy consultations as a way of combating it was tested. It showed that, although there is potential of energy savings and people in FP reacted very positively to any kind of support, further measures are necessary to effectively tackle the issue. A research cluster centred around the Austrian Institute for Sustainable Development (ÖIN) produced the first extensive research from 2008 (Kopatz et al. 2010, Brunner et al. 2010a, 2010b, 2011a, 2011b, 2012) embedded in a larger research project called NELA with the goal of understanding characteristics of fuel poverty in Austria, as well as the living conditions and energy consumption behaviours of people affected by FP (it is important to note that there is no "official" definition in Austria) Some of the results from NELA: People living in FP are already trying to cut costs as strictly as possible and generally live in deprived circumstances, often involving debt. These people lack capital to make investments in order to buy better appliances or insulate their homes. The fact that they usually live in rented apartments further complicates any attempt to improve energy efficiency. (Brunner et al. 2010a)

Other notable research was conducted by Thomas Berger from the Technical University of Graz (Berger 2011) who created a comprehensive overview over existing data and research in Austria and put FP into a regional context.

3.6 The research context of the dissertation

This dissertation may be able to contribute to several gaps in the literature

- While UK fuel poverty is a thoroughly discussed issue and several publications, especially the Hills review provide an excellent analysis of policies, few attempts have been made to create European comparisons or to create a theoretical framework to understand policies around Europe in different policy settings with different levels of recognition of FP.

- While there is a slowly emerging debate outside the UK the issue of policy has been neglected. While several publications make suggestions on further measures this dissertation may be the one of the first attempts to systematically analyse UK fuel poverty with the intention to identify lessons learned to apply in another country.
- In Austria the academic debate has so far avoided a detailed debate about fuel poverty policy as well as the the question to what extent existing policy measures could be refined or supplemented due to lessons learned in other countries.

3.7 Summary

Although this lit review could only offer a very limited overview it shows that the academic debate in the UK is much more advanced and has laid the foundation for other European countries. Slowly, other European countries are becoming more aware of the distinct nature of FP and are starting to catch up. This dissertation can contribute by spreading developed ideas and established results from the UK debate to the Austrian debate.

4. Fuel poverty policy

This chapter will create a short overview of the particularities of fuel poverty policy. It will be based on both the reviewed literature and the research conducted in this dissertation, forming a transition between the lit review and the analytical part. As the issues discussed are heavily interrelated, points made may be repeated in different parts of this chapter.

4.1 Fuel Poverty is an interdisciplinary issue with unclear responsibilities.

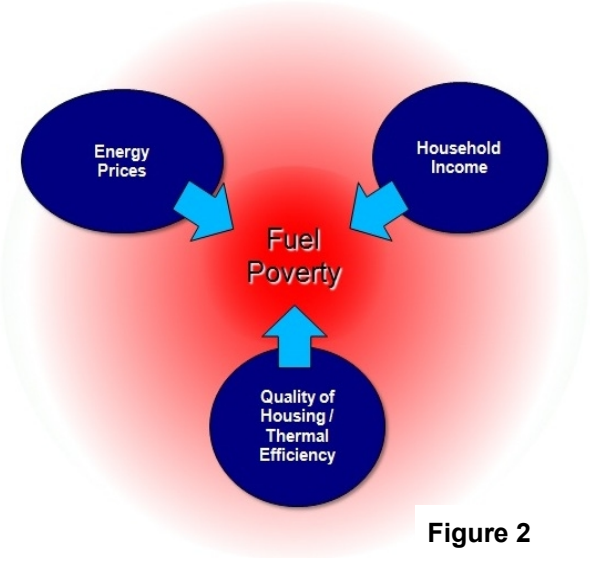


Figure 2

As described in the lit review there is a broad consensus regarding the three main causes of FP being (1) energy prices, (2) housing quality (this factor is often referred to as 'thermal efficiency', 'housing stock', 'energy efficiency' or similar), and (3) household income (Hills 2012). The fact that these causes themselves are very distinct issues, with complex and diverse underlying causes has practical implications for policy makers, as the following analytical chapters will illustrate. In practice, the relevant policy fields energy policy, housing policy and social policy are usually covered by different government departments. This can mean that introducing the issue into the political discourse or getting official bodies to start efforts to gain information (e.g. by funding

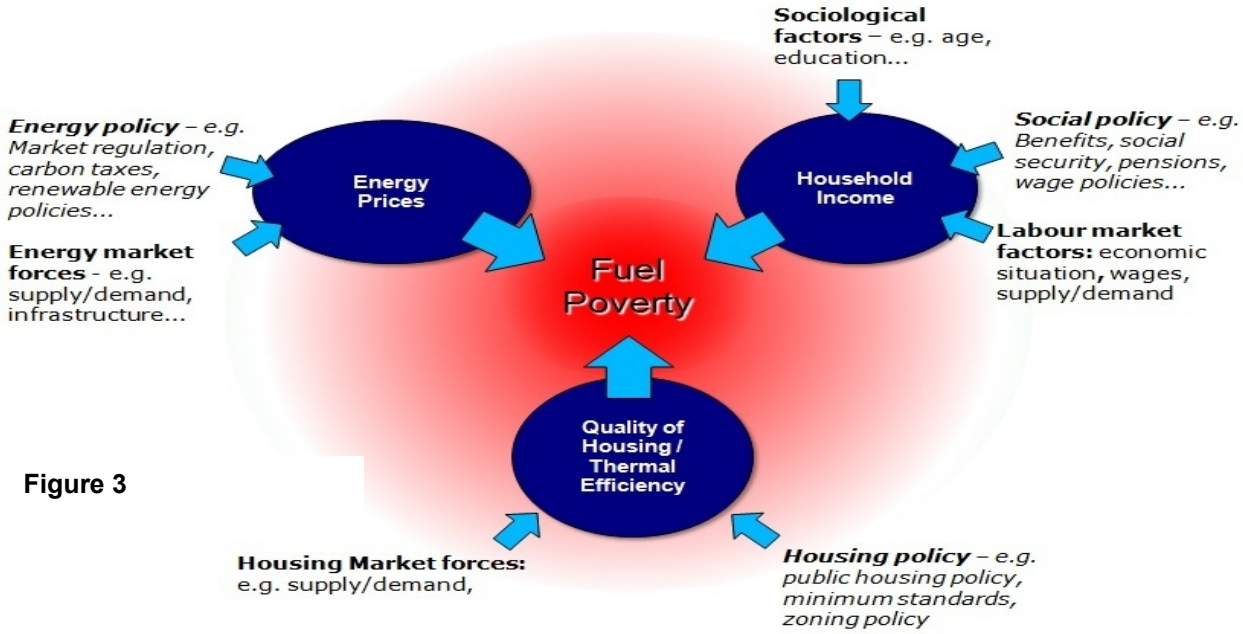


Figure 3

research) can – as the studied cases show - be hampered by ministries or departments arguing over responsibilities or limited funds. Similarly, after the political recognition of FP, the question who is responsible for overseeing policies also needs to be answered.

Brenda Boardman summarised the problem in an interview for this dissertation: *"As many other policy issues fuel poverty is an interdisciplinary issue that does not fit into departmental boundaries. What you need is an interdepartmental group, with one department given the primary responsibility to get solutions [...] it could be (the department responsible for) energy, social issues or even health"* (Interview Boardman) These conflicts become more complex, as the examples of Austria, Belgium and France will show, when the responsibilities and funds are also divided between national, regional or local authorities.

The fact that an emerging policy issue will not fit into established political structures is certainly not an unique characteristic of FP. However this interdisciplinary uncertainty has implications for successful policy making, as well as making it hard to address and establish as a political issue in the first place.

4.2 Definition vs. targeting

As illustrated in the literature review the debate about how to quantify, identify and define fuel poverty is complex and very policy relevant. *"Any definition of fuel poverty will involve political choices. So therefore it is important to distinguish between what fuel poverty actually is - a lack energy services to meet certain standards of health and culture – and understanding how it needs to be defined politically to best target particular groups. These are two different things."*(Interview Bouzarovski) Like Bouzarovski several academics emphasise that a distinction has to made between the rather academic discussion of defining and quantifying FP, the individuals perception of FP and eligibility criteria for policy (Waddams-Price et al 2007, Fahmy et al. 2011, Boardman Interview)

	Defining fuel poverty	Targeting fuel poor
Characteristics	Theoretical, strategic, academic	Practical, applicable
Policy level	Agenda setting, policy formulation	Policy formulation, implementation
Purpose	Indicate scale of problem and trends,	Determine eligibility for funds
Scale	National, regional	Local, "on doorstep"

Table 1

While this dissertation lacks the scale for a detailed discussion of definitions, it is important to stress the importance of targeting effectively. *"It is so hard to precisely pin point people with a*

definition that it almost becomes irrelevant. It is much more important for policy to effectively target those most severely affected." (Interview Boardman) However, due to the multidimensional nature of FP this can be challenging. Ron Campbell (NEA) emphasises the practical limitations of definitions: "*The main purpose served by a definition is to get an idea of the amount of people affected and to indicate trends. We have never had a situation were we could actually use the definition of fuel poverty to deliver assistance to individual households, instead we have always been reliant on proxies."* (Interview Campbell) He maintains that in the UK in practice those policies that combine low income, a low or modest energy efficiency standard and some other kind of vulnerability (e.g. disability or elderly) in their eligibility criteria are most effective in targeting fuel poor. (Interview Campbell)

4.3 Policy types and targeting

The Hills review (2012) identifies three categories policy addressing fuel poverty, each targeting one of three causes of FP:

(1) Income based policy (e.g. heating benefits) – policies that aim to move people out of fuel poverty by increasing household income, thus making the energy costs a smaller proportion of the household budget.

(2) Price based policy (e.g. social tariffs) – policies that aim to reduce energy costs by making the energy used cheaper.

(3) Energy efficiency policy (e.g. insulation grants) – policies that aim to reduce energy costs by reducing the amount of energy. This form of policy differs from the first two as it requires large capital investment rather than continuing payments to households.

As already discussed, apart from identifying the causes of FP (thus the group of people effected) a policy wishes to address, the actual effectiveness also depends on targeting. Even advocates of strong policies toward energy efficiency note that a income based policy that is adequately targeted toward the fuel poor will do more to make their households warmer than an energy efficiency policy that is poorly targeted, even if it does not address the underlying causes. (Interview Boardman, Interview Bouzarovski) Hills (2012) discusses policy targeting in detail using his suggested LIHC definition of FP. As shown in the lit review, Hills uses a diagram composed of two

axis representing low income (being influenced by income based policy) and high energy costs (being influenced by both price based and energy efficiency policy) to order to demonstrate his definition and also to describe policy impact. Depending on the policy eligibility the targeted quadrant As the LIHC definition of FP is relative all three kinds of policies, if effectively deployed, can theoretically reduce the proportion of income spent on fuel.

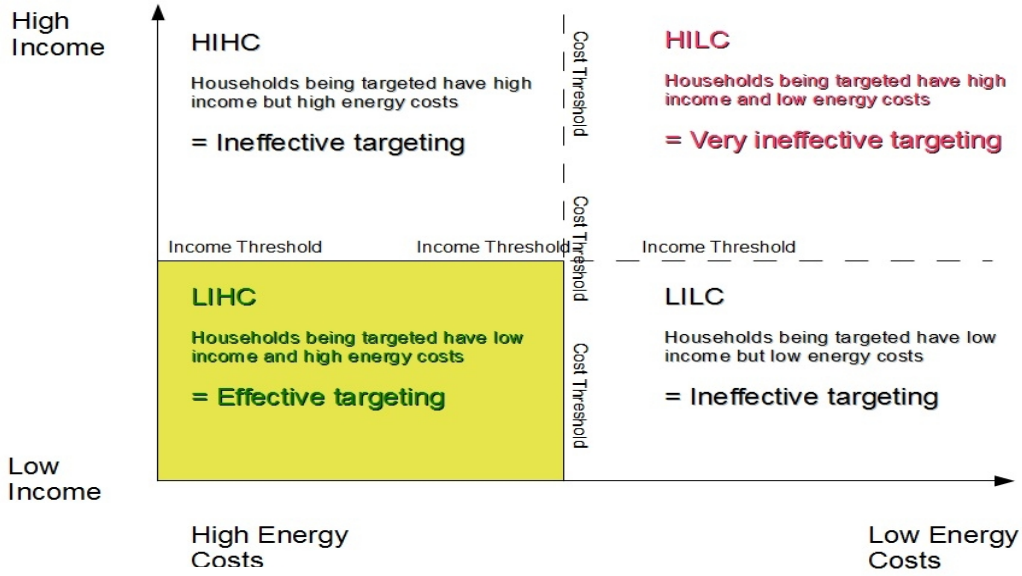


Figure 4

Income related policy that is well targeted will move households from the lower left into the upper left of the graph (figure 5) If such a policy is not well targeted it will move people in the lower right – people that do not suffer from high energy costs upward (figure 6) thus using fuel poverty funds to address people without bad housing.

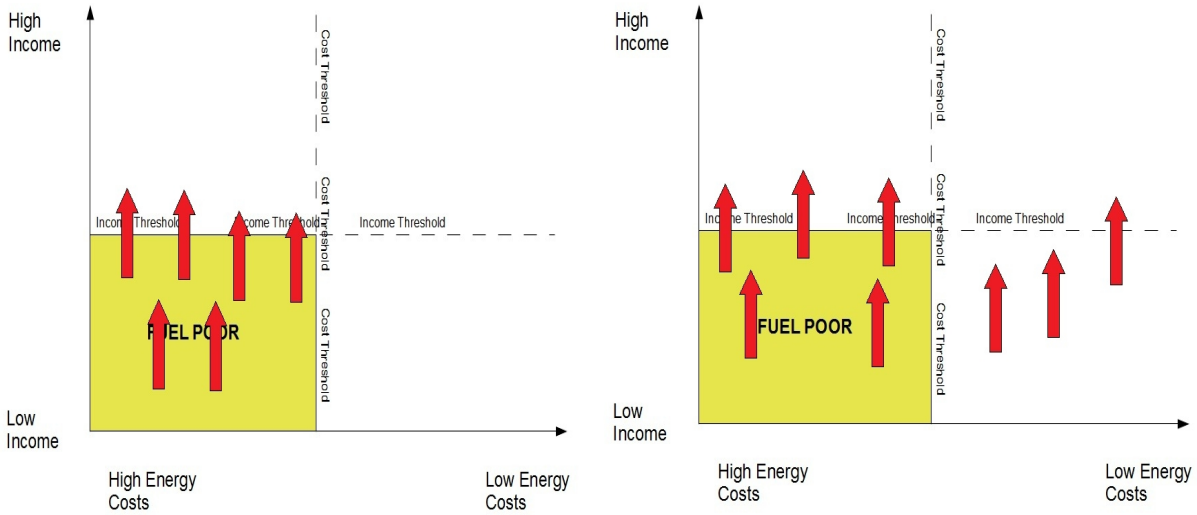


Figure 5&6

Policies that address energy costs, by either reducing prices or a households energy demand would

move households from the bottom left to the right if targeted properly (figure 7) But weak targeting may mean that people with high incomes and energy inefficient homes might receive funding (figure 8) diluting the effectiveness of policy.

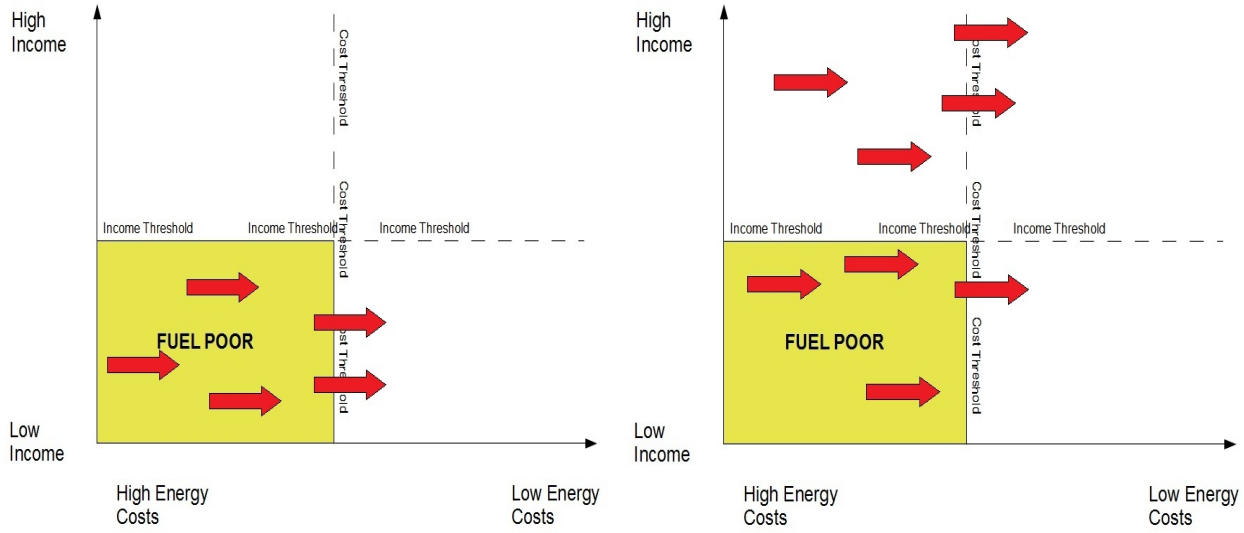


Figure 7 & 8

4.4 Temporarily alleviating fuel poverty versus permanent fixes

In the academic debate, the choice of preferred policy is related to which one of the causes is perceived as more significant. It is important to understand that there is a fundamental difference between eradicating FP and just alleviating it, even if in both cases the person affected is warmer. (Interview Boardman) There is some consensus toward seeing bad housing conditions as the underlying issue, thus emphasising the importance of policies addressing the housing stock. Hills, Boardman (2010, 2012, Interview), Palmer et al. (2008) and Bouzarovski (Interview) have pointed out it would highly inefficient to address FP solely by income or price related measures, and stress the importance of capital intensive measures toward improving the housing conditions.

While social policy measures such as heating benefits or a monthly income support can lift a person out of FP, it does not address the underlying problem of energy inefficient housing conditions. *"While fuel prices and low incomes are constituent factors, the real cause of fuel poverty is the energy inefficiency of the home."* (Boardman 2012) Eradicating FP on the other hand requires capital investments. *"Social policy by itself is a treatment, but not a cure"* (Interview Boardman) Thus any strategy aiming for a long term solution for fuel poverty will have to go beyond measures addressing income.

4.5 Labelling policy and terminology suggestions

As Figure 9 shows fuel poverty policy could be understood as an area where the larger policy fields of energy policy, social policy and housing policy meet. This (very simple) visualisation is particularly helpful understanding the sometimes confusing fact that different European countries on the one hand lack a common recognition or definition of FP, while this dissertation as well as other publications refer to fuel poverty examples from those exact same countries. The key here lies in understanding that labelling a policy measure fuel poverty policy is irrelevant regarding its effectiveness in actually addressing the issue. (Interview Boardman, Interview Campbell, Interview Bouzarovski) An means-tested heating benefit for example in a country without an official recognition or definition of FP while being conceptualised merely as a social policy measure may also be effective addressing households in FP. At the same time a policy labelled fuel poverty policy may not benefit those most severely affected due to weak targeting.

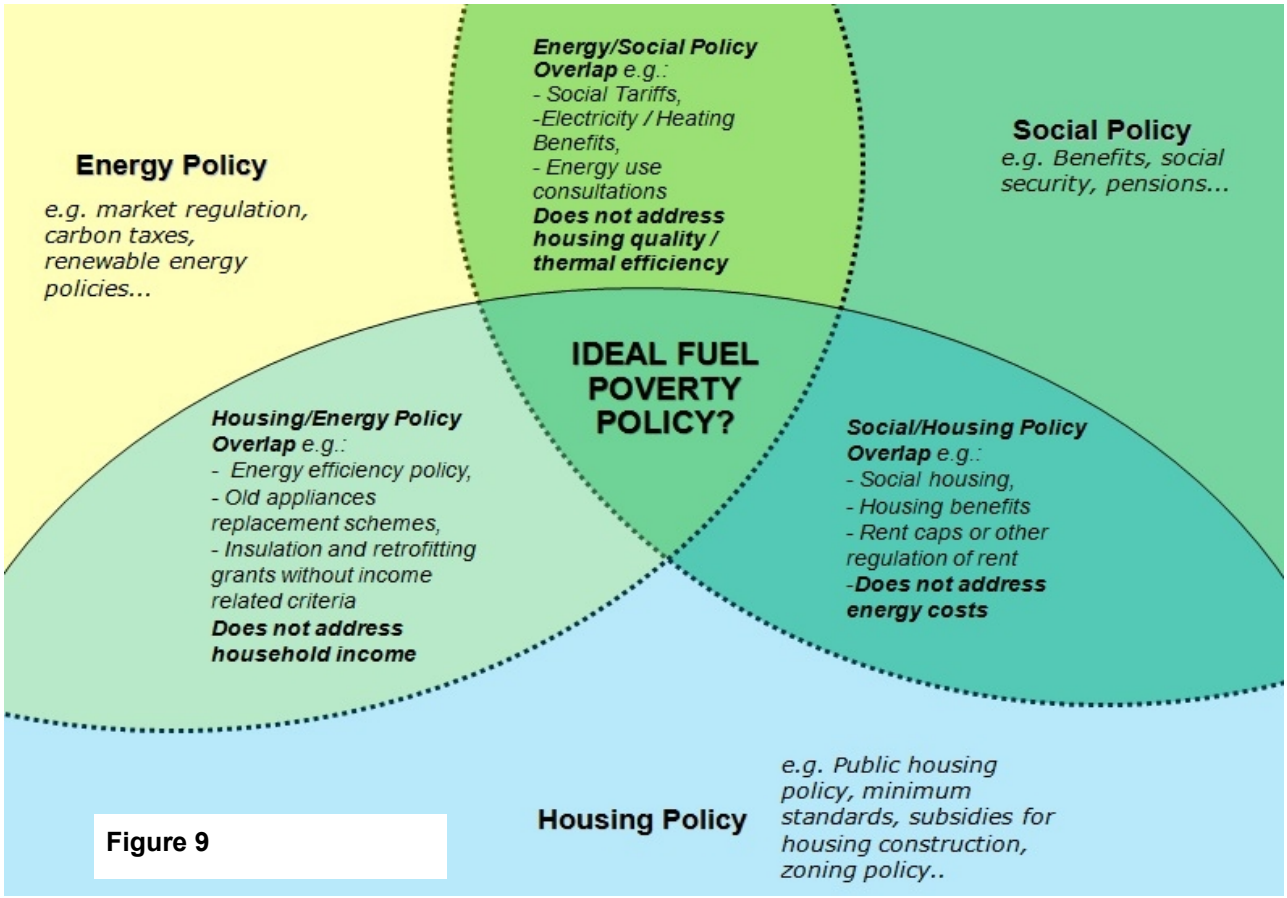


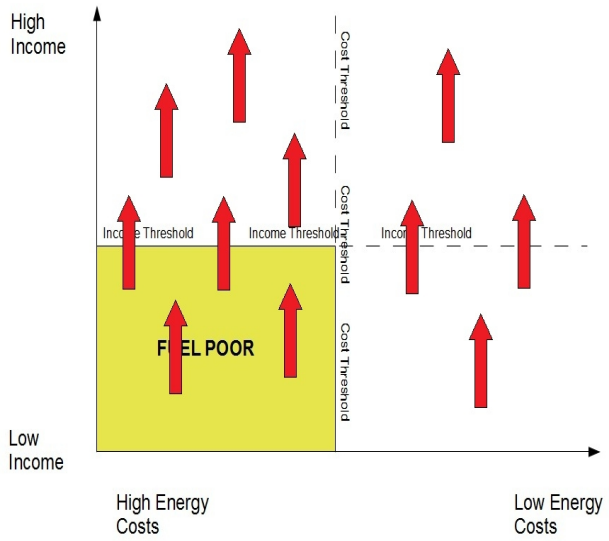
Figure 9

The illustration shows the interdisciplinary nature of fuel poverty policy and suggesting that **fuel poverty policy can be understood as the ideal overlap of energy policy, social policy and housing policy,** corresponding to the three most important causes: energy prices, housing quality and income. Some points about this concept of understanding fuel poverty policy:

1) It is important to understand that this does not mean that policies that do not address all three causes of FP are unable to help fuel poor, however it suggests that policies located in the exact middle of the diagram are most effective at tackling this multidimensional issue, because funds are concentrated on those effected the most. The better a policy is targeted toward fuel poor the more it will move to the centre of the diagram, with less resources being used for non-fuel poor households.
2) While it is hardly possible to conceive policy that equally addresses fuel prices, housing conditions and low income, the overlaps rather show policies that use targeting in be sensitive to issues from different policy areas. E.g. an insulation grant touches on energy policy and housing policy, but without including a social dimension in its targeting it will remain in the overlapping area of those two policy fields. Although it might help some fuel poor, it will not be as effective combating fuel poor as the same insulation grant which also targets low income households, thus moving the policy into the centre of the diagram. Another example would be a heating benefit located in the overlap between energy and social policy. While possibly already helping fuel poor, including a housing dimension by targeting low income energy users in energy inefficient housing would move it toward the housing policy field, making it fuel poverty policy.
3) One of the advantages of visualising policy this way is that many other depictions, usually along Energy cost / income axis do not differ between reducing energy costs by insulating (capital intensive but long term solution) and influencing energy prices

In terms of terminology and to avoid confusion with labelling this dissertation suggests restricting the term fuel poverty policy to measures that have this three dimensional approach in terms of targeting. Of course policies in the overlaps can play an important part in combating fuel poverty, even if they aren't FP policy per se according to this definition. Such policies, which are two dimensional could be referred to as *quasi fuel poverty policy.* This results in three policy categories of measures labelled fuel poverty policy.

- *Pseudo fuel poverty policy* – policy addressing one dimension/cause of FP. An example would be the the UKs winter fuel payment, which will be discussed in detail later. Such policies may be beneficial to a certain social group and may be well thought through policy, however their weak targeting makes them ineffective for combating FP. Using Hills visualisation of targeting effectiveness such policies would look this way:



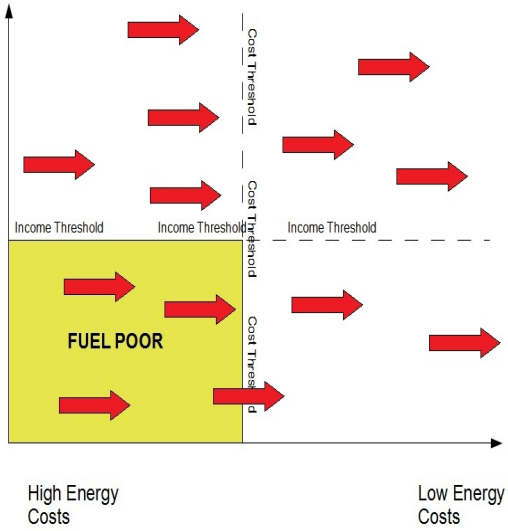
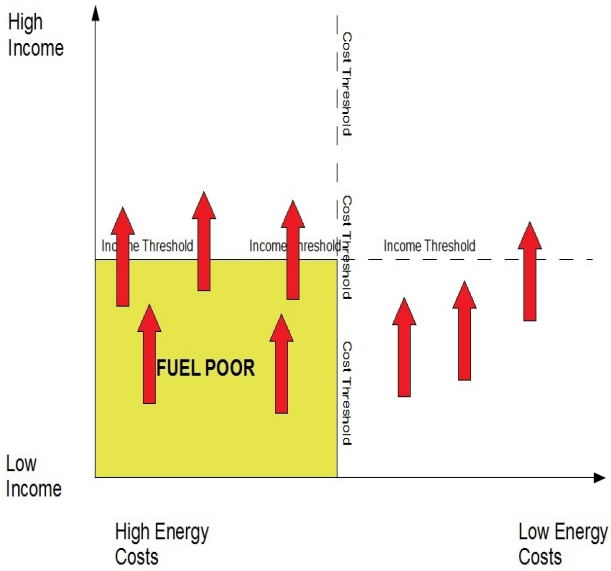
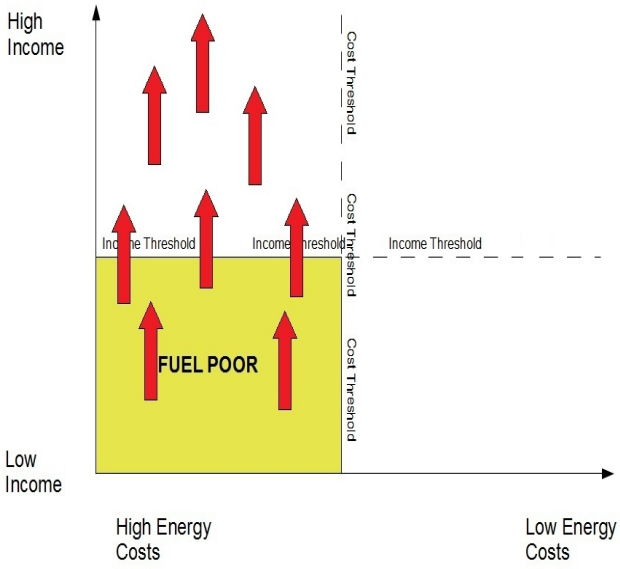
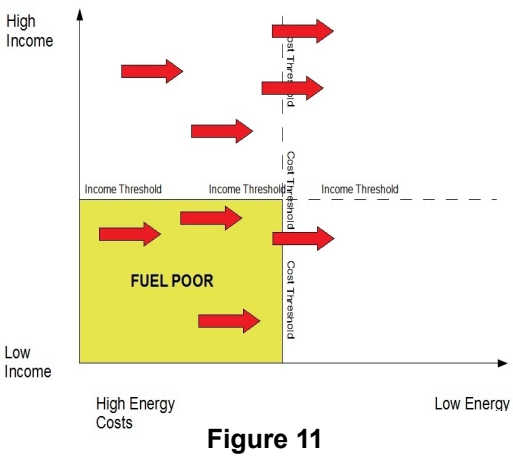


Figure 10





– *Quasi fuel poverty policy* – policy addressing two dimensions of FP. These are the policies in the overlaps of two policy fields. Social tariffs may certainly benefit fuel poor, even if



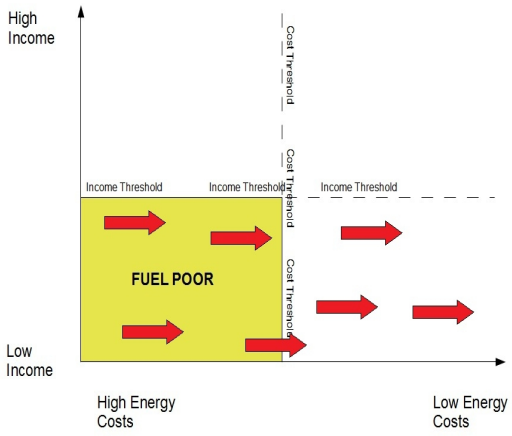


Figure 11

they neglect the underlying issue of energy efficiency. Also an insulation grant that anyone has access to regardless of their income situation will certainly benefit some fuel poor households, however lacking the income dimension to be effective fuel poverty policy. Using Hills visualisation of targeting effectiveness such policies would look this way:

– *Fuel poverty policy* – policy taking all three dimensions of FP into account, thus most effectively targeting fuel poor. For example such policies could be income sensitive insulation grants or social tariffs for energy inefficient households. Using Hills visualisation of targeting effectiveness such policies would look this way:

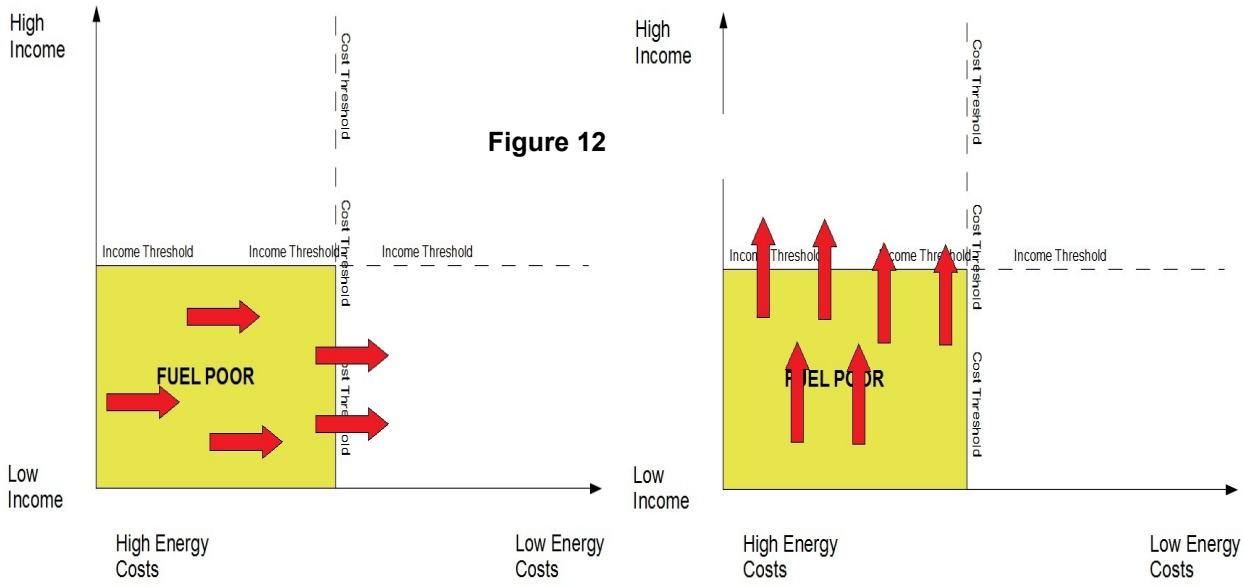


Figure 12

This classification policy is based on targeting and a policies sensitivity toward the three different dimensions of FP. It avoids the confusion of labelling and allows categorising policy in countries lacking political recognition of FP. It is important to note that this does NOT mean that only fuel poverty policy per se can solve the problem of FP, as country examples will show, it is possible to tackle fuel poverty only by means of pseudo FP policy or quasi FP policy. It is a question of effectively using funds to address a problem.

4.6 Funding considerations:

The last point to discuss before analysing policy examples is the question of funding. How policy is funded is very important and influences policy success. (Boardman 2010, 2012, Interview, Hills 2012, Interview Bouzarovski) Policies are generally either funded by the government (via taxes or other forms of government incomes) or by the energy costumers them selves. (Hills 2012)

- Government funded policy usually relies on a progressive tax system which places a proportionally bigger burden on high income families. This means that fuel poor households, while benefiting from measures against fuel poverty will not or only to a lesser extent carry the costs. In theory this also means that their income has improved relative to the burdened higher incomes, which is statistically relevant if – as suggested by Hills (2012) – a definition of fuel poverty framed by a median income percentage threshold is being used. (Hills 2012, Interview Bouzarovski)

- Policies where funding comes from energy costumers (either from recipients of fuel poverty programs or from all energy costumers) are not progressive and are more likely to increase fuel poverty (Hills 2012, Interview Bouzarovski). Examples for such a policy are social tariffs for vulnerable costumers, or energy company energy energy efficiency obligations. Such programs distribute costs over all energy bills, punishing fuel poor who pay a disproportionally large amount of income for energy, while only benefiting some who are targeted by the policy. (Hills 2012) Also: As many fuel poor are not home owners but tenants it is likely that fuel poor will contribute to improvements made on a property they do not own, upgrading the value of the property with out requiring any capital costs by the landlord. This could be interpreted as an upward transfer of wealth.

4.7 Summary

This chapter offered an overview of the principles of fuel poverty policy and offered a more in depth discussion of some of the literature as well as laying out a theoretical framework suggesting how to categorise fuel poverty policy. Important factors that determine the effectiveness of policy such as targeting and funding are also discussed.

Fuel poverty related policy is located in the overlaps between energy policy, social policy and housing policy. A policy that is three-dimensional is a lot more effective in targeting.

5. Fuel poverty related policy in the UK

UK policy response to fuel poverty is remarkable not only because it is the oldest attempt to specifically address the issue, but also because of the amount of different policies addressing it. This chapter will offer an short description and analysis of policies labelled fuel poverty policy try and identify lessons learned.

5.1 Overall strategy and funding.

After the political recognition of FP as a distinct issue by the new Labour government in 1997 the first legislatory action was the Warm Homes and Energy Conservation Act (WHECA) in 2000. This act required the government to ensure that no one 'as far as reasonably possible' would be suffering from FP in England by 2016 and Wales by 2018. Similar legislation was soon adopted in Scotland (Housing Act 2001) and Northern Ireland (Boardman 2010). The WHECA required the government to create a strategy to achieve this goal and the consultation process resulted in the UK Fuel Poverty Strategy.

On the one hand the strategy was positively received because it generally did a *"good job in analysing what factors make fuel poverty*" (Interview Campbell) However the actual policy output left a lot to be desired. Boardman criticises reliance on falling fuel prices, the vague uses of terminology like "assistance" or "measures" and the overall lack of a comprehensive strategy what policy measure addresses what household. (Boardman 2010) *"The strategy did not provide for a clear series of outcomes [..] Nor did the strategy provide a clear business plan covering the measures necessary to achieve those outcomes over the whole period."* (Boardman 2010, 7)

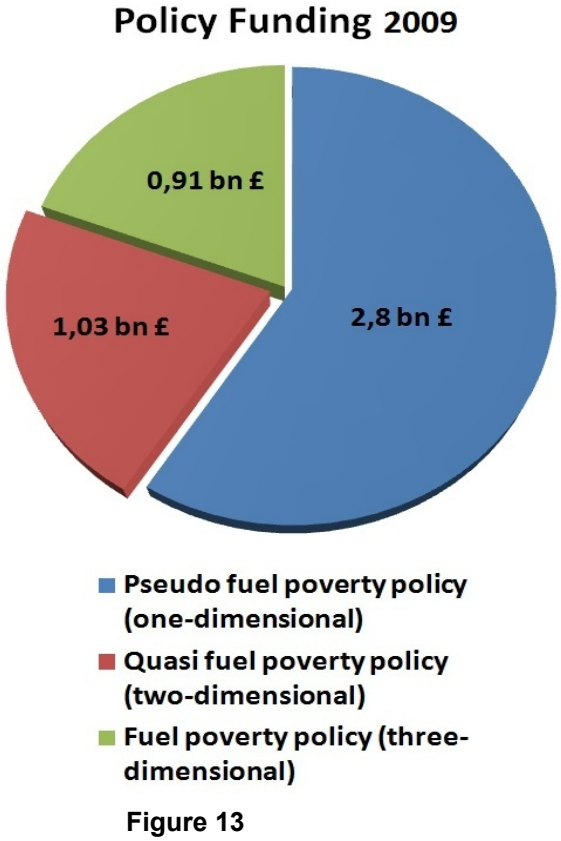


Figure 13

The distribution of funds in the period since 2001 has shown that while there was a good understanding of causes in the UKFPS this did not translate into effective policy making. In 2009 the money spent on Winter fuel payments – as this analysis will show probably the most ineffective

pseudo-fuel poverty policy in the UK context - dwarfed all other efforts. While 2.8bn. £ were spent on a one dimensional policy, the Warm Front only received a fraction (0.37bn £) (Hills 2012). This means that in 2009 the distribution of funds according to the suggested terminology was 2.8bn £ for pseudo fuel poverty policy 1.03bn £ for quasi fuel poverty policy and 0.91bn £ for three dimensional fuel poverty policy. Figure 14 shows that funds intended to address fuel poverty were very ineffectively used.

Criticism by NGOs as well as rising numbers of fuel poor households made it obvious that there were some flaws and this led to a re-evaluation of fuel poverty policy toward the end of the new millenniums first decade. Energy Act 2011 changed the overall direction of policy addressing FP in the UK. While policies in the UKFPS were financed by the Exchequer (mainly via a progressive tax system) the policy response in the Energy Act heavily relies on market based, consumer funded solutions. This has been criticised as a step into the wrong direction (Interview Boardman, Interview Campbell, Interview Bouzarovski, Hills 2012). Also, as UKFPS policies such as Warm Front phase out the not only the source of funds changes but the type of policy too. By 2016 the Warm Frond pseudo fuel poverty policy will sill be allocated with the largest proportion of funds, a total of 1.62bn £, quasi fuel poverty policies with 1.27bn £ and three dimensional fuel poverty policy will only be allocated with 0.32bn £, a little more than a third of

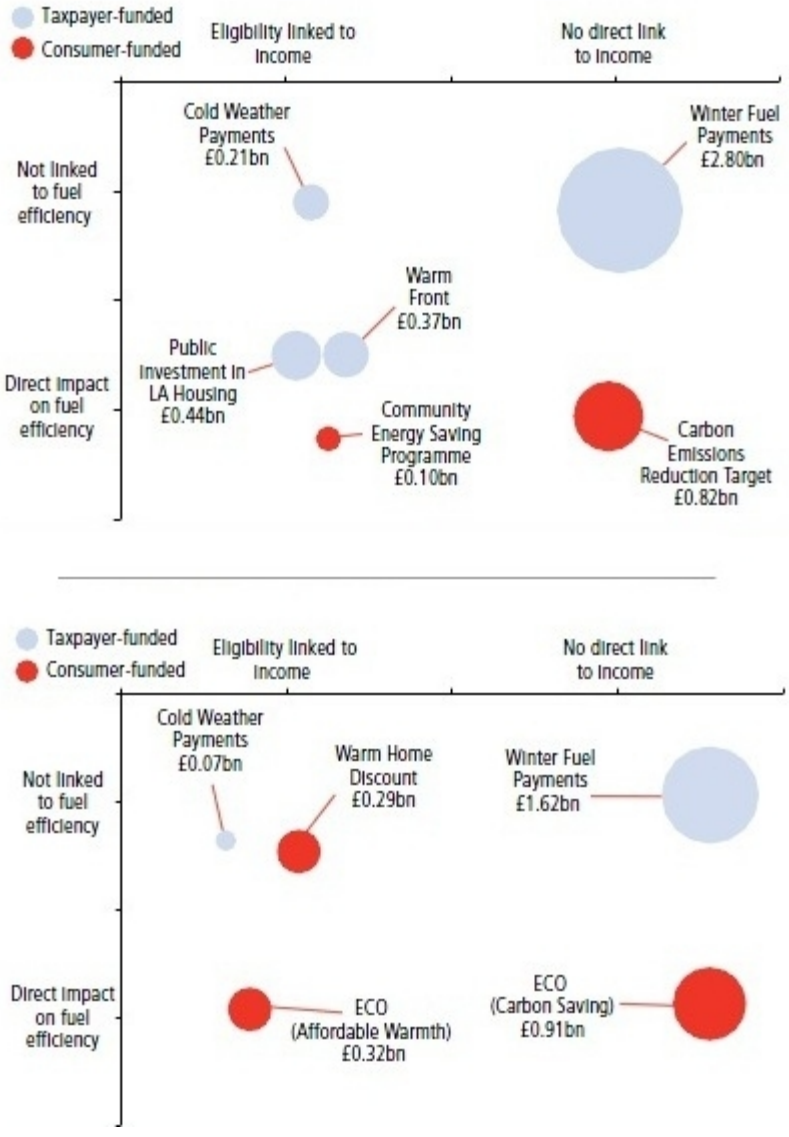


Figure 14 illustrates the distribution of UK fuel poverty policies along targeting aixs (Hills 2012)

2009. This means that, although there has been an increase of fuel poor over the last decades (the rate of increase depends on the definition) not only will there be less funds available to fight fuel poverty, but they will also be less effectively targeted.

5.2 Income related policies

5.2.1 The Winter Fuel Payment

The WFP was established 1997 by the same Labour government that first recognised fuel poverty. As already mentioned the Winter Fuel Payment has attracted heavy criticism, not only because of its ineffective targeting, but also because of the amount funding it receives. According to the Department for Work and Pensions the UK spent around 15bn £ on the WFP between 2006 and 2012 (DWP 2007, 2008, 2009, 2010, 2011, 2012), money that could have most likely been used for more effectively targeted policy. *"The winter fuel payment should be renamed pension supplement policy. Most people receiving it are not fuel poor, so it is not really fuel poverty policy."* (Interview Boardman) While labelled fuel poverty policy by the Government (Hills 2012) it is a clear case of pseudo fuel poverty policy, as it is a one-dimensional approach.

5.2.2 Cold Weather Payment

In contrast to the WFP the Cold Weather Payment has often been used as an example of good targeting (Interview Campbell). The eligibility criteria combine low income and vulnerability to provide support for older households, families with young children and households where a family member lives with some form of disability. "*With minor variations the Cold Weather Payment eligibility criteria are increasingly used to target other fuel poverty interventions - including the Super Priority Group element of the Carbon Emissions Reduction Target, the Affordable Warmth element of the imminent Energy Company Obligation and the 'Broader Group' element of the Warm Home Discount."*(Interview Campbell)

When temperatures remain low over a defined period of time eligible households have access to funds. 2011/12 funding was at around 431mn £ (DWP 2012), less than fifth of the WFP. The CWP could be classified as a quasi fuel poverty policy in the overlap between social policy and energy policy.

5.3 Policies addressing fuel prices

5.3.1 Warm Home discount

The WHD was introduced 2011 and is a discount on energy bills provided by major UK energy companies. The policy mainly targets elderly, but can also be applied to other vulnerable groups. It is one of the more recent UK fuel poverty related policies where funds do not come from the government, costs are carried by energy companies who pass it on to other costumers (Hills 2012). The WHD has been criticised because certain vulnerable groups (e.g. large families) are not eligible (Consumer Focus 2011). Also, Baker (2007) points out that social tariffs only work if there is price transparency, and points out that in some cases social tariffs are not the best option for a household.

5.4 Energy Efficiency related policies

5.4.1 Warm Front

The Warm Front Programme was installed in 2000 and has been referred to as the "governments flagship programme" (Boardman 2010, 147) against fuel poverty in England. From 2000 to its temporary closure in 2011 2.3 Million households received funds, which is about 11% of English homes, for a total of about 2.85bn £ (Parliament 2011). This means that in 10 years WF has received roughly the same amount of funds as the Winter Fuel Payment did just for 2009.

Despite providing insulation for many households the WF program has been criticised because of its weak targeting. According to Boardman (2010) only 25% of the warm front expenditures actually went the homes of fuel poor. Reasons for this were a cap on receivable funds which is too low to help households in severe FP, as well as the "first-come-first-serve" application procedure. *"As is often the case when policies require people to self identify and ask for help, those that are assertive and self confident will come forward first, and not necessarily those most severely affected. Many vulnerable individuals feel marginalised, distrust help from the outside and my fear that any change to their home or their heating system might be to their disadvantage."* (Interview Boardman)

Warm front usually only can provide limited measures, as there is a spending cap per households. This means that energy inefficient houses may for example only get either loft insulation or cavity insulation or floor insulation, but not all at the same time. This means that fuel poor households might actually still be in fuel poverty after being "treated". (Boardman 2010)

The combination of a greatly reduced Warm Front budget and the need to better target this limited funding on fuel-poor households led to the introduction of new eligibility criteria from 2011. The

revised criteria combined financial disadvantage, vulnerability and poor to modest energy efficiency standards. However the new, more rigorous eligibility criteria and the lack of any promotion for the scheme meant that Warm Front had a major underspend in 2011-2012. (Interview Campbell).

5.4.2 Warm Zones

The Warm Zones program was initiated in 2000, it is administered by the National Energy Action with funding support from local, national government as well as EU funding. (Warm Zones 2012) Unlike WF it does not accept applications by self identified fuel poor, but proactively targets deprived areas, approaches households and offers consultations on benefits, energy use as well as providing energy efficiency measures. (Boardman 2010) This happens in cooperation with local authorities, in order to most effectively target deprived areas. Unlike WF Warm Zones tries to offer holistic solutions for whole areas rather than targeting individual households. Ron Campbell from NEA says Warm Zones has met with *"virtually universal approval"* and may be one of the best ways to fight fuel poverty. *"The reason why warm front is so effective is because it allows for economies of scale as whole areas are targeted, rather than individual households. This way we can also avoid stigmatising individual households."* (Interview Campbell)

While several third party evidence for the success of Warm Front (Boardman 2010, CAG 2010, EPEE 2007b) the programs limited scale holds it back. WF programs have been initiated in several UK cities, but the program is far from covering the whole country, as funds are very limited.

5.4.3 CERT and CESP

The Carbon Emission Reduction Target and the Community Energy Savings Program, introduced 2008 to replace the Energy Efficiency Commitment, is a energy company funded home insulation scheme. The primary policy goal is to reduce carbon emissions, however the government claims it will also benefit fuel poor. (DECC 2009) During its duration the program 2008-2012 will amount to about 1bn. £ spent on insulation measures around the UK. Inspired by the success of Warm Zones CESP more specifically targets deprived areas, its funding will amount to 0.35bn £.

As already discussed policies that use energy company funds are likely to cause higher fuel bills for costumers, burdening fuel poor with disproportional energy bills. This seems to be the case with CERT: While ALL costumers carry the costs of energy efficiency measures, only 15% of the funds (DECC 2009) will benefit the fuel poor who already have disproportionally high energy costs. It seems doubtful such a policy is beneficial for them.

CESP may be better, as it specifically targets deprived areas. But as with CERT all energy consumers will pay for measures, including fuel poor not being targeted by the program.

5.4.4 Green Deal and ECO

The Green Deal and ECO will be the backbone of future UK policy addressing FP. The Green Deal will offer funding to households for energy efficiency measures which is paid back via the electricity bill. Here the so called "Golden Rule" will apply: the energy savings on the bill because of the efficiency measure will be greater or at least equal to the loan repayment. This way carbon emissions are reduced and housing stock renewed without requiring capital investments by the owner, landlord or the occupant.

However despite government claims this policy might also help fuel poor, this has been criticised (Interview Campbell, CIH 2011, FOE 2011, BBC 2011), on commentator calling it a *"useless middle class subsidy"* (The Guardian 2012). The two major criticisms are the fact that the "Golden Rule" is very unlikely to apply to fuel poor households due to their low energy efficiency levels, as well as that the overall plan lacks ambition in scale.

ECO is something of a successor of CERT and CESP as it uses energy company funds to tackle those households where the Green Deals Golden Rule won't work. The program is made up of ECO – Carbon Saving, focussed on reducing emissions and ECO – Affordable warmth, specifically addressing fuel poor. However as with CERT and CESP the funds provided by energy companies will end up on everyone's energy bills, while only benefiting very few fuel poor. The scale of ECO - Affordable Warmth is smaller than Warm Front, so it is doubtful that it be a game changer.

5.5 Analysis

The UK has been a testing ground for a large variety of successful and unsuccessful policies related to fuel poverty. However, the actual long term political goal of eradicating fuel poverty will not only be missed, but it seems likely that the scale has increased since the political recognition of the problem.

It seems that despite of a highly developed academic debate, a large number of devoted NGOs tackling the issue and a large sample of policies to learn from the government has either failed to understand important principles of fighting fuel poverty or is unwilling to apply them for political reasons. From a strategic perspective the following points are striking:

- Fuel poverty related policy will shift from public funding to a more market based approach, diverting funds from a progressive tax system where fuel poor are less likely to carry the costs to energy costumers where fuel poor are more likely to be burdened. This may actually harm the fuel poor rather than helping them.
- While the scale of funding never matched the scale of the issue (Interview Campbell) and the money always was disproportionally concentrated on pseudo and quasi fuel poverty

policies, this disparity will continue with future fuel poverty policy. If the UK's government is serious about reducing fuel poverty it will have to concentrate funds on three dimensional fuel poverty policy, with targeting being sensitive to all aspects of fuel poverty.

As discussed earlier the UKFPS has been criticised for being to vague without a clear idea about what policy will address what aspect of fuel poverty or what particular vulnerable group. Also a patchwork of policies rather than a holistic approach of how to help households complicates the already difficult identification and targeting procedure. *"We (the UK) have proved that a bundle of individual policies, rather than a holistic strategy will is bad news. It's too many visits to the households and too little done at one time."* (Interview Boardman) This however does not mean it would be sensible to simply rely on one well thought out policy, as the fuel poor are a diverse group of people. *"No one individual measure will cover everyone. There has to be a mix of measures addressing the issue from different sides. No policy, however well targeted, will be able to help everyone affected."* (Interview Bouzarovski)

5.6 Summary and lessons learned in the UK

- Eradicating fuel poverty requires funds to be concentrated on three dimensional fuel poverty policy. The UK has labelled many policies fuel poverty policy, but the largest part of funds was invested in pseudo fuel poverty policy and quasi fuel poverty policy, which may also help some fuel poor, but are ineffective at solving the problem
- Not only the amount, but also the source of funding will determine policy outcome. The idea of outsourcing the costs of fighting fuel poverty may be convenient, but there is little evidence it will help.
- Local approaches seem to work well, as households that might not self identify as fuel poor or are worried outside intervention might not benefit them, can be approached. Local know how generated in cooperation with local NGOs and authorities can ensure that only deprived areas are targeted with a holistic approach, rather than cherry picking individual households – which a) might lead to social stigmatisation b) might not be practical in the case of individual apartments in a larger structure c) would stop only the most assertive self identifying households to get funds.
- The UK example has also showed that any strategy on fuel poverty will have to well thought through with clear competences, a long term budget plan and a realistic roadmap what goals

should be reached at what point. Policies should be designed in a way that they compliment themselves addressing fuel poverty from different angles.

6. Fuel poverty related policy examples and their context around Europe

This chapter aims to create a short overview and analysis of several other fuel poverty related policy examples and the context they are embedded in.

6.1 France

As described in the Literature review the issue of FP is rather new in the French public and political discourse, however due to increases in energy prices it is rapidly gaining momentum. The issue entered the political debate trough the "Grenelle Round-tables" a political consultation process involving stakeholders which addressed a variety of sustainability, housing, transportation and energy issues (Interview Dubois). This group produced the already mentioned Pelletier report (2009) which led to the inclusion of a vague fuel poverty definition in the "Grenelle 2" law which defines fuel poor as *"anyone who meets, in its housing, particular difficulties to have the necessary energy to meet their basic energy needs because of the inadequacy of its resources or of its housing conditions"* (Interview Dubois) In practice this definition however is supplemented by the UK's 10% threshold. (Dubois 2012). However, France still lacks a comprehensive strategy or plan to address the issue.

The first policy result of the Grenelle 2 law was the installation of the "**Habiter Mieux"** program in 2011. Running until 2018 the government plans to invest more than 500mn € into insulation measures. (ANAH 2012) Habiter Mieux can be interpreted as an actual three dimensional fuel poverty policy as eligibility criteria not only include a low energy efficiency standard but also low income and other vulnerability criteria. (ANAH 2012) In practice the policy is targeted toward elderly in rural areas (Interview Dubois) and several vulnerable groups are left out, such as fuel poor households that are not home owners. Also, it is doubtful that the scale funding will be adequate and as with Warm Front people have to self identify to have access to the funds, which might mean that not the most severely affected, but the most assertive people will get assistance.

HM is publicly funded by the ANAH (Agence nationale de l'habitat – National Housing Agency) administered and distributed on a local level, by the authorities responsible for social policy. (Interview Dubois)

Also related to fuel poverty, but pre-dating the official fuel poverty definition, is the **"Fonds Sociaux d'aide aux travaux de maîtrise de l'énergie"**. Eligibility criteria is not clearly defined by law, households will be provided with funds according to local social workers. Usually these are already known vulnerable households with high energy bills (EPEE 2007c, ANAH 2012) 80% of

the FSATME funds come from public sources the rest is contributed by energy companies as well as the landlord in case of fuel poor being tenants. Funds are used to provide new appliances and for insulation measures. In practice this policy has shown to effectively target households, as individuals are usually already known by social workers, who can embed energy efficiency improvements in a holistic approach of helping a households. However, involving tenants has proved problematic (EPEE 2007c).

While FSATME addresses already known fuel poor, HM will try and provide help to a wider group of vulnerable people. Funding comes largely from public funding, however involves energy companies and landlords. Both policies are three dimensional fuel poverty policies which shows that despite a very young and limited debate on FP funds are targeted effectively. Also these policies prove that such policy can integrate well into a localised social welfare system.

6.2 Belgium

While France has showed some progress in terms of political recognition of FP and policy making, the growing awareness of the issue has not yet reached the political arena or led to specific policy measures. (Bartiaux 2012) In Belgium matters are additionally complicated by the fact that social policy is legislated on the federal level, while energy policy is dealt with on the regional level.
However, some policies already in place are related to fuel poverty. One that is frequently discussed is the **Social Tariff (tarif social)** which was introduced in 2002. This social tariff is a typical quasi fuel poverty policy, administered by social policy authorities on a national level, but with some variations in eligibility criteria in the different regions. The TS is provided by energy companies, however the shortfalls are compensated by a government fund and it can be applied for personally or in cooperation with local social workers. The eligibility criteria include low income, already receiving other income related benefits or other vulnerability factors such as a disability. (EPEE 2007) At the same time the government installed a fund which could be used if vulnerable costumers were unable to pay energy bills “despite best efforts”. The eligibility criteria is similar to the TS, with regional variations. (Bartiaux 2012)

What is remarkable is that in Belgium these social policy related quasi fuel poverty policies that were introduced on a national level are counteracted by regional energy policy. As already described in the lit review there has been a policy shift away from government funded support to market based loan systems, as well as a push toward pre-payment metering, which especially affects fuel poor. (Bartiaux 2012) The Belgian example illustrates not only how difficult it can be to create fuel

poverty policy, but how challenging it becomes when not only energy and social policy, but also local, regional and national governments are not coordinated and combining efforts against fuel poverty.

6.3 Spain

Thompson (2011) and Tirado (Interview) are quick to debunk the myth that fuel poverty is not as relevant in warmer climates, in fact lack of infrastructure and severe economic difficulties make fuel poverty a big problem in southern Europe. Despite this, the government is still in downplaying the issue (Interview Esquerra, Tirado 2012) however they reacted to rising fuel prices with the introduction of the "**bono social**", a social tariff which works on two levels: 1) it reduces bills by 6% and 2) it freezes the energy price at the time of application, which means that the vulnerable consumer is immune to price rises. As with the Belgian tarif social the government compensates the energy companies. But weak targeting dilutes the effectiveness of the bono social: eligible groups include the elderly, disabled and large families, however without any income or energy based criteria. (MINETUR 2012) This means that a high income family is eligible for funds just like a low income family and makes the bono social a pseudo fuel poverty policy. The Spanish state also distributes funds to the regions who provide a wide array of energy efficiency policies. The regions distribute these funds (**Plan Renove**) according to own criteria, however without income related criteria. As the funds often require a household to also make capital contributions it could be interpreted as more of a "middle class subsidy" (Interview Tirado).

Despite the problem of fuel poverty being relatively severe in Spain, the lack of political recognition and the very young public and academic debate leave a lot to be desired in terms of effective fuel poverty policy. As the bono social again illustrates, ineffective targeting con completely undo a well-intentioned policy and waste funds.

6.4 Lessons learned

The scale of this dissertation only allowed for a very limited insight into fuel poverty related policy in three European countries, but it does illustrate how policy is formed by its political context and show that as in the UK certain factors can determine the quality of policy:

- It's all about targeting. Good policy ideas (such as the bono socials freezing of prices) are squandered by bad targeting. At the same time, even in a country where fuel poverty is not necessarily precisely defined and quantified three dimensional targeting can lead to effective fuel poverty policy.

- Fuel poverty policy can work being integrated into existing social policy infrastructure.
- Even well targeted policy will be sabotaged if social policy, energy policy or housing policy, as well as the different administrative levels are not coordinated in an effort to fight fuel poverty. Good policy on a national level will have little use if on a regional level steps are made in the opposite direction.

7. Austria – Applying lessons learned

This chapter will briefly describe the characteristics of fuel poverty in Austria, the broader Austrian context and outline already existing relevant policy. Then lessons learned from other countries will then be applied to outline possibilities and challenges for future fuel poverty policy.

7.1 Fuel poverty in Austria

Like in most other European Countries FP has not yet become a mainstream political issue, but as mentioned in the lit review public and scientific interest is increasing. Due to a lack of recognition and definition there are no "official" numbers on the severity of the issue, however a survey by the National Statistics Office (Statistik Austria) providing data for the EU-SILC survey show that 313.000 people have difficulties paying energy bills (BMASK 2010) which indicates that proportionally the problem may be somewhat less severe than in other countries. Brunner et al. (2011) however stress that there is a lot of uncertainty due to the lack of an official definition and the fact that in Austria, as anywhere else, self reported fuel poverty may differ from a statistical approach.

It is also important to note that the relatively small scale of the problem does not mean that it is not growing. Caritas Austria, one of the biggest Austrian charities, is noticing an increasing number of people struggling with energy costs (Interview Müller), and similarly the energy market regulator E-Control has noted a surge of requests for help with issues related to the inability to pay energy bills and arguments about disconnections (Interview Veigl-Guthann). Thomas Berger stressed that despite a relatively low poverty rate Austria has one of the fastest growing wealth gaps of OECD countries. (Interview Berger)

7.2 The context

There may be a number of reasons for lower levels of fuel poverty: Additional to a relatively stable economic development the poverty rate is lower than most European countries. The reasons for that are a favourable development of the labour market and the highly developed welfare system. The amount of people threatened by poverty is also relatively low due to a low unemployment rate, a higher rate of social expenditure and relatively high benefits. (Interview Steiner)

There is a political consensus on the necessity of the welfare state and a highly cooperative approach: Austrian social policy has traditionally been characterised an involvement of the "social partners" (representatives from the Austrian Federal Economic Chamber, the unions, the Chamber

of Labour and the Chamber for Agriculture) aiming to create consensual solutions beneficial for both the economy and the welfare system. (Interview Steiner, Pelinka and Rosenberger 2003)

Characteristics of the housing stock and housing culture may also be relevant: Statistically speaking housing in Austria is newer and more likely to be renovated than in other countries analysed in this dissertation (Statistik Austria 2004, DCLG 2010, BZK 2010) The direct comparison with UK data (see table 2) is interesting as UK fuel poverty related policy was adapted for the needs of fuel poor living in certain housing conditions – which may not necessarily be as relevant in Austria.

Age of Housing		
	Austria	England
Pre 1919	18.7%	21.4%
1919-1944	8.6%	16.4%
1945-1980	44.7%	41.2%
Post 1980	28.0%	21.0%

Type of Housing		
	Austria	England
Terrace House, Detached or Semi Detached	51.0%	81.2%
Flat	49.0%	18.6%

Occupancy status		
	Austria	England
Owner occupied	49%	68%
Renting or other	51%	32%

Table 2

Especially notable is the fact that in Austria a lot more people live in flats and are a lot more likely to rent rather than being home owners. While in the UK (Boardman 2010) and France (Interview Dubois) fuel poor usually to live in energy inefficient houses, in Austria fuel poor are likely to rent energy inefficient flats (Brunner et al. 2011, Interview Niedermühbichler) Mariella Müller from Caritas Austria, a NGO working directly with people struggling to pay energy bills: *"Despite a relatively high standard of housing in Austria our experience working with low income households show that they seem to generally live in quality housing, a vast majority as tenants. This situation is particularly bad in Vienna."* (Interview Müller) Data from Statistik Austria confirmes that although the housing stock is relatively new, old and unrennovated housing is disproportionally concentrated on low income households (Statistik Austria 2009)

What is also important, especially for low income households is that Austria has the largest percentage of social housing in the EU (Statistik Austria 2009) which means that it is not unlikely that many fuel poor live in publicly owned housing.

There are also some particularities to the Austrian Energy System. While fully liberalised according to EU-law, the companies dominating the market are still owned by public majorities. Being the former regional state energy providers they hold de-facto monopolies in their respective federal

region (German: Land). Despite alternatives Austrian energy costumers have not developed a market-mentality and are reluctant to compare prices, chose between available options and only about 1% actually switch providers per year. (Interview Veigl-Guthann) This may be because these locally entrenched companies have been well established for decades and have very developed ties to local populations - for instance through sponsorships of local events and teams. This reluctance to switch providers and close ties to established providers seem even more counter-intuitive considering the fact that due to clear legal provisions for suppliers to provide the price information to the regulatory authority the transparency of tariffs is very high compared to other European countries. (Interview Veigl-Guthann)

7.3 Fuel poverty related policies already in place

The strong welfare state has a positive effect on the fuel poverty factor income, and some fuel poverty related policies are already in place. The "**Heizkostenzuschuss**" is a means-tested heating benefit which is provided on a regional level and funded publicly. Eligibility criteria are different in every "Land", but generally are related to low income. The amount paid also varies regionally. (Stadt Wien et al 2012)

Also on a regional level, there are different funds related to energy efficiency measures, as well as the "**Wohnbauförderung"** a public fund which provides people constructing new homes or renovating old ones with contributions to their interest payments, thus softening their loans. These schemes often have strict energy efficiency criteria, but are not in anyway connected to social policy, making them middle class and upper class subsidies in practice. (Interview Niedermühlbichler)

7.4 Applying lessons learned and creating new policy

7.4.1 Definition and Targeting

As discussed at several points in the dissertation a definition of fuel poverty lays the foundation for quantifying and understanding fuel poverty in a national context, but it is not a basis for policy. As there still is a lack of clear data on who is actually (most) affected by FP and how many FP live in what conditions and locations, a definition of the FP for the Austrian context would be the first step for a larger strategy against fuel poor. But as for instance the French example illustrates effective fuel poverty policy can be made without an airtight definition, as long as targeting is three-dimensional in its approach. The UK example has shown that policy shortcomings were related to

targeting issues and not a necessary to a overall strategic misunderstanding of what constitutes fuel poverty.

Targeting will depend a lot on findings on further research, such as a more detailed understanding of the housing conditions of fuel poor demographic and geographic distribution. Further research might support the suggestion made earlier that there are some particularities in Austria compared to the UK, the forerunner in terms of policy making.

While the definition of fuel poverty is of academic and strategic interest, the effectiveness of policy in practice will heavily depend on the quality of targeting. If fuel poverty is to be effectively fought, a three-dimensional approach will be essential.

7.4.2 Who is responsible?

While this dissertation did not find any evidence that there is any significant advantage in any particular department or ministry taking responsibility, it is clear that it is advantageous if competences are clarified as soon as possible, not only between departments but also between federal, regional and local levels. In the UK example this was achieved by the establishment of an inter-departmental group, which was under the responsibility of one department (Interview Boardman) This is likely to be one of the biggest challenges in Austria of implementing fuel poverty policy.

The Belgian example of regional and federal social and energy policies counteracting each other can serve as a reminder how important coordination and cooperation with such an interdisciplinary issue as FP is.

7.4.3 Federal, regional or local?

As social policy as well as many funding instruments for housing policy are located on the regional level any fuel poverty policy is likely to also to be located here. The French case and to some extent the Belgian case have demonstrated that an integration into local social policy infrastructure can be beneficial and Warm Front and CESP in the UK have demonstrated that a localised approach to tackling deprived areas has practical advantages in terms of cost and targeting. To avoid contradicting federal and regional policy it would be recommendable both are embedded in an overall energy or social policy strategy.

7.4.4 Policy recommendations

- Regarding the strategic level several points have already been made. Apart from the importance of a coordinated and cooperative approach the UK example has shown that a

clear roadmap of goals with a realistic and thought trough idea of finances will be necessary. One of the most important lessons the UK has to offer is that policies should aim to be complementary and interlocking, rather than just individual measures. Policies have to have a purpose, being focussed on a clearly targeted group of fuel poor. At the same time it is unlikely that one single policy with one single targeting criteria will solve the problem.

- Policy should be three-dimensional so targeting would have to be sensitive not only to thermal efficiency but also the income of the household, as well as other vulnerability factors.
- Implementing enery efficiency policy locally and **target whole areas and buildings rather than individual households** would also be sensible. Housing statistics show that Austrian fuel poor live in flats rather than houses, and targeting single flats may not be feasible or practical. *"While the Ministry of Labour, Social Affairs and Consumer Protection in principle agrees with the idea of energy efficiency grants of low income households, and there is some movement on this issue [..] the problem is that such grants might not make a lot of sense in many cases, as renovation measure would be required for the whole building and wouldn't work on an individual apartment. […] It is more likely that in Austria, rather than targeting individual households the owners of apartment blocks, as well as publicly owned social housing will be addressed by policy."* (Interview Steiner) This means that UK policies such as Warm Front, where funds are distributed to individual households, may be more effective in a setting where fuel poor are more likely to be home owners living in houses, but might have limited effect in Austria. Policy will have to take such differences into account.
- **Pro-actively approaching households, instead of having eligible households self identify, will avoid the assertive drain first-come-first-serve funds, which others might need more.**
- Too many visits to the same households should be avoided – instead a holistic approach of energy efficiency measures, as well as energy consultation and help with benefit applications would be more effective.
- It will be a major challenge to involve landlords into such policies and the UK and French experience have shown this can be a problem, without there being any evidence of a perfect solution. This will be a crucial point for such policy in Austria keeping the higher percentage of tenant fuel poor into account. It will have to be a fine balancing act between involving landlords and improving properties while at the same time not imposing high costs that will

be passed on to tenants. **If fuel poverty policy creates energy effective housing that is unaffordable for low income households is not likely to be successful.** At the same time there are political and moral questions attached to involving landlords: An arrangement such as the Green Deal, where tenants pay for improvements in a property they do not own, may of course be more attractive to landlords, but it would also mean that property values will be increased without any contribution by the owners themselves. This may effectively mean making low income households spend some of their income increasing the wealth of middle and upper-class households, which is a questionable social policy goal.

- There is still a lot of renovation potential in Austrian social housing (Interview Brunner) which could help improve the situation of fuel poor in Austria. But these measures have to also be sensitive to the additional cost it might put on the tenants. Georg Niedermühlbichler President of the Austrian tenants union heavily criticises the exaggeration of energy efficiency standards and the drive toward "Passivhaus" technology: *"The last decades have seen a strong funding focus on very low energy and "Passivhaus" standard housing. This policy may have greatly improved energy efficiency, but at the same time severely increases costs, making living more expensive despite lower energy costs. While principally a good energy efficiency standard is important, one has to be critical to what extent such an obsession with making housing as low energy as possible is actually beneficial for low income households. Also, from a sustainability perspective there are many unanswered questions: what happens to all the oil-based insulation material, after it as reached the end of its lifespan? At the moment "sustainable" insulation material is still horrendously expensive."*(Interview Niedermühlbichler)
- The UK Energy Act 2011 introduces minimum energy efficiency standards for rented property (DECC 2012). While such legislation would certainly have an impact in Austria due to the large amount of fuel poor tenants it will again be essential to resolve the basic question how to stop housing costs from rising at the same time.
- With income related policy targeting will also be essential. The "Heizkostenzuschuss" could for instance be adapted so for instance energy inefficient households receive higher funds than well insulated homes. But while social policy will mitigate the effects of fuel poverty, it doesn't not fight the underlying causes. The UK case has shown that paying the Winter Fuel Payment over the years has amounted to a huge sum, which literally went out of the window and is lost for energy efficiency measures.
- The transparency of the Austrian Energy market might make a social tariff a viable option, if some key points are observed: (1) they must actually be cheaper than other available market

options (2) they must be targeted better than for instance the Spanish bono social and (3) funding must compensate energy companies to stop them from spreading the costs on energy bills.

- Funding considerations: As discussed extensively in this dissertation the source of funding will have an impact on policy effectiveness. While funding based on a progressive tax system will burden higher income households, leaving energy efficiency measures to a market based system or placing the burden of funding on energy companies who are likely to pass it on to costumers is not likely to benefit fuel poor. The question who pays for the fight against fuel poverty is a political and moral one, which has been answered differently around Europe. Any attempt to address fuel poverty in Austria will have to find an answer. It seems unlikely that the tempting prospect of solving a social problem without public investments or a contribution by high income households can work.

8. Summary and Conclusions

This dissertation aimed to analyse fuel poverty related policy, create an overview of existing policies in the UK and other European countries and identify lessons learned for a future Austrian attempt to create fuel poverty policy.

Fuel poverty related policy lies in between the larger areas of social, energy and housing policy which reflects the interdisciplinary nature of the issue of fuel poverty. In light of the fact that different countries are at different stages of recognising fuel poverty and policies may not be labelled as fuel poverty policy this dissertation suggested categorising fuel poverty related policy into (1) pseudo fuel poverty policy (2) quasi fuel poverty policy and (3) fuel poverty policy – reflecting the fact that these policy categories approach the issue from a one-, two- or three dimensional perspective. Also this avoids confusion with labelling, as something called fuel poverty policy might de facto only be a one-dimensional approach. The practical effectiveness of policy is determined by its targeting, its type (energy efficiency, income or price based) as well as the source of its funding.

The UK provides a number of policy examples which offer different lessons learned. The overall strategy against fuel poverty lacked coherency, providing a number of uncoordinated policies with unclear goals. It is essential to note that in the bulk funding has been wasted on the most ineffectively targeted policy, as well as being income related, meaning the funds were not invested in the housing stock but are forever lost. The Warm Front programme, the English flagship policy was for a long time ineffectively targeted. Against the recommendations of the academic debate and the experience of NGOs the focus of future, even lower funded UK policy will remain on pseudo and quasi policies and feature a strong drive toward market based and company funded approaches. It seems unlikely this will have a positive impact.

The other European countries analysed show a varying degree of recognition of fuel poverty ranging between recent political adoption of the concept to denial of its existence. Fuel poverty related policies in Belgium also suffer from contradicting federal and regional policies, showing the dangers of a lack of coordinated strategy. France has recently introduced policy measures which, despite of a lack of a clear concept of fuel poverty, seem to be well targeted, albeit limited in scale. The Spanish bono social, a policy to tackle rising energy costs, is crippled by ineffective targeting.

The previous chapter analysed Austrian particularities and outlined possibilities and potential problems for fuel poverty policy. Like Belgium Austria is a highly federalised country which,

together with a lack of clear departmental competences, may hamper policy making and implementation. An analysis of the Austrian housing stock show that there are quite significant differences to the UK, with a higher percentage of flats and people being more likely to rent. This also as policy implications: Policies might not be able to focus on home owners, but rather on owners of apartment blocks or on the large percentage of social housing. This might be a further argument to emphasise a localised approach involving local actors and know how, with a "on the doorstep" identification of fuel poor, rather than distributing funds to individual households.
It is to be hoped that whatever policy measures Austria implements they will be based on and funded by a clearly thought through strategy, being more than just the sum of its individual policies. These policies will have to be well targeted and complementary to be effective. Such an overall strategy will have to be based on still missing research of the exact weight of factors contributing to fuel poverty in Austria and grounded by a definition which is both practical and precise.

The crucial question how to involve landlords and who will pay for fuel poverty measures does not have easy answered and will have to be subjected to deep and honest thought.

References

ANAH (2012) http://www.anah.fr/habitermieux.html (accessed 05/09/2012)

Barteaux, F. et al (2011) Policies affecting energy poverty in Belgium: paradoxes between social and climate policies. Paper for the INCLUSEV meeting in Durham

BBC (2011) http://www.bbc.co.uk/news/science-environment-18074650 (accessed 05/09/2012)

Berger, T. (2011) Energiearmut: Eine Studie über Situation, Ursachen, Betroffene, AkteurInnen und Handlungsoptionen, Spectro

BMASK: (Federal Ministry for Labour, Social Affairs and Consumer Protection) (2010) Social Report 2009-2010 http://www.bmask.gv.at/cms/site/attachments/3/2/3/CH2171/CMS1289832560842/sozialbericht_2010_web.pdf (accessed 05/09/2012)

Boardman, B. (1988) Economic, Social and Technical Considerations for Fuel Poverty Policy. Submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy, Science Policy Research Unit, University of Sussex

Boardman, B. (1991) Fuel Poverty: From Cold Homes to Affordable Warmth, Belhaven Press, London

Boardman, B. (2010) Fixing Fuel Poverty. Challenges and Solutions, Sterling, London

Bouzarovski, S., et al., (2012) Energy poverty policies in the EU: A critical perspective. *Energy Policy (2012), Article in Press*

Brandshaw, J. and Hutten, S. (1983) Social Policy Options and Fuel Poverty. In: Journal of Economic Psychology 3 (1983) 249 - 266

Brunner, K-M et al. (2011a): Energiekonsum und Armut. In: Sozioökonomie: Die Rückkehr der

Wirtschaft in die Gesellschaft, Mikl-Horke, Gertraude, Marburg: Metropolis Verlag.

Brunner, K.-M.,et.al., (2011b) Experiencing fuel poverty. Coping strategies of low-income households in Vienna/Austria. Energy Policy (2011),doi:10.1016/j.enpol.2011.11.076 (in press)

Brunner, K.-M et. al. (2011c), Fuel poverty. A case study of vulnerable households in Vienna/Austria, In: ECEEE 2011 SUMMER STUDY 2057-2068

Brunner, K.-M et. al. (2011d), NELA - Nachhaltiger Energieverbrauch und Lebensstile in armen undarmutsgefährdeten Haushalten, Österreichisches Institut für Nachhaltige Entwicklung

CAG (2010), Review of area-based energy efficiency initiatives in Scotland http://www.cagconsultants.co.uk/resources/tm/area-based_review_main_report.pdf(accessed 07/05/2012)

Centre for Sustainble Energy (CSE 2012) CSE's response to the Hills Review Interim Report http://www.cse.org.uk/downloads/file/CSE_response_to_Hills_Review_interim_report.pdf (accessed 05/09/2012)

DECC (2011) Annual Report on Fuel Poverty Statistics 2011

DECC (2012) http://www.decc.gov.uk/en/content/cms/funding/fuel_poverty/strategy/strategy.aspx (accessed 05/09/2012)

DCLG (2010) English Housing Survey 2008, http://www.communities.gov.uk/documents/statistics/pdf/1750754.pdf (accessed 05/09/2012)

DECC (2011) Annual report on Fuel Poverty Statistics http://www.decc.gov.uk/assets/decc/Statistics/fuelpoverty/2181-annual-report-fuel-poverty-stats-2011.pdf (accessed 05/09/2012)

Dubois, U. (2012) From Targeting to implementation. The role of identification of fuel poor households. In: Energy Policy – article in press

Dunn, W. (2012) Public Policy Analysis, Pearson, New Jersey

DWP (Department of Work and Pensions) (2007) Departmental report, http://www.dwp.gov.uk/publications/corporate-publications/dr07.shtml (accessed 05/09/2012)

DWP (2008),Departmental report, http://www.dwp.gov.uk/publications/corporate-publications/dr08.shtml (accessed 05/09/2012)

DWP (2009),Departmental report, http://www.dwp.gov.uk/publications/corporate-publications/dr09.shtml (accessed 05/09/2012)

DWP (2010), Departmental report, http://www.dwp.gov.uk/publications/corporate-publications/dr10.shtml (accessed 05/09/2012)

DWP (2011), Departmental report, http://www.dwp.gov.uk/publications/corporate-publications/dr11.shtml (accessed 05/09/2012)

ECO (2010) Policies and initiatives to combat fuel poverty. Identifying international best practice, ECO, London

End Fuel Poverty Coalition (EFPC 2012) End Fuel Poverty Coalition: initial response to Hills review, http://www.cieh.org/assets/0/72/1126/1212/1216/1218/d5bc04a0-ff84-495f-9763-96604544b1a8.pdf (accessed 05/09/2012)

EPEE (2007a) Good practices experienced in Belgium, Spain, France, Italy and United Kingdom to tackle fuel poverty. http://www.fuel-poverty.org/files/WP4_D11.pdf (accessed 07/05/2012)

EPEE (2007b) Evaluation of fuel poverty in Belgium, Spain, France, Italy and the United Kingdom. http://www.fuel-poverty.org/files/WP2_D6_en.pdf (accessed 05/09/2012)

EPEE (2007c) Diagnosis of causes and consequences of fuel poverty in Belgium, France, Italy, Spain and United Kingdom. http://www.fuel-poverty.org/files/WP2_D5_final.pdf (accessed 07/05/2012)

EPEE (2007d) Country Analysis: Belgium. http://www.fuel-poverty.org/files/WP2_D6_Belgium_en.pdf (accessed 05/09/2012)

EPEE (2007e) Country Analysis: Spain. http://www.fuel-poverty.org/files/WP2_D6_Spain_en.pdf (accessed 05/09/2012)
EPEE (2007f) Country Analysis: UK. http://www.fuel-poverty.org/files/WP2_D6_UK_en.pdf (accessed 05/09/2012)

EPEE (2009) Detailed report on the different types of existing mechanisms to tackle Fuel Poverty http://www.fuel-poverty.org/files/WP3_D8_final.pdf (accessed 05/09/2012)
(accessed 05/09/2012)

Fahmy, E. et. al. (2011) Predicting fuel poverty at a small-area level in England, Energy Policy 39 (2011) 4370–4377

FOE (Friends of the Earth) (2011) Briefing the Green Deal http://www.foe.co.uk/resource/briefings/green_deal.pdf (accessed 05/09/2012)

(the) Guardian (2012) http://www.guardian.co.uk/environment/georgemonbiot/2012/jan/13/green-deal (accessed 05/09/2012)

Healy, J. D., and Clinch, P. (2002) Fuel poverty in Europe: A cross-country analysis using a new composite measure. Environmental Studies Research Series, University College, Dublin.

Hills, J. (2012) Getting the measure of fuel poverty. Final Report of the Fuel Poverty Review

Hirsch et al. (2011) Understanding fuel expenditure: Fuel poverty and spending on fuel, Consumer Focus Report, http://www.consumerfocus.org.uk/files/2011/10/Understanding-fuel-expenditure.pdf (accessed 05/09/2012)

Huybrechs (2011) La Précarité Energétique en Belgique, http://dev.ulb.ac.be/ceese/CEESE/documents/Energiearmoede_La_Precarite_Energetique_en_Belgique_rapport_final.pdf (accessed 05/09/2012)

Kopatz et al. (2010) Energiearmut, Stand der Forschung, nationale Programme und regionale Modellprojekte in Deutschland, Österreich und Großbritannien, http://www.wupperinst.org/uploads/tx_wibeitrag/WP184.pdf (accessed 05/09/2012)

Knoepfel, P. (2007) Public Policy Analysis; The Policy Press, London

Lidell, C. et al. (2010) Fuel poverty and human health: A review of recent evidence. *Energy Policy38(2010)2987–2997*

Moore, R. (2012) Definitions of fuel poverty: Implications for policy, Energy Policy (2012) (in press)

NEA (2012) http://www.nea.org.uk/ (accessed 05/09/2012)

Obaldeston, J. (1984) Fuel poverty in UK cities. In: Cities (1984) 366-373

Palmer et al. (2008) Fuel poverty and income overlap. http://www.poverty.org.uk/reports/fuel%20poverty.pdf (accessed 05/09/2012)

Pelinka, A. and Rosenberger, S. (2003) Österreichische Politik, Facultas, Vienna

Pelletier (2009) Groupe de travail Précarité énergétique Rapport

Proidl, H. (2009): Pilotprojekt "Energieberatungen von einkommensschwachen Haushalten", E-Control and Caritas

RAPELL (2011a) Precarite Energetique, Etas des lieux et propositions d'actions http://www.precarite-energie.org/-Documentation-generale-.html (accessed 05/09/2012)

RAPELL (2012) http://www.precarite-energie.org/-La-precarite-energetique-.html (accessed 05/09/2012)

Robertson and King (1995) Fuel and Energy Abstracts, 36 (1995) 384-385

Rugkåsa, J. et al (2007) ‘‘The walls were so damp and cold’’ fuel poverty and ill health in Northern Ireland: Results from a housing intervention. Health and Place, 13: 99-110

Statistik Austria (2004) Wohnsituation in Österreich, http://www.statistik.at/web_de/statistiken/wohnen_und_gebaeude/index.html (accessed 05/09/2012)

Statistik Austria (2009) Armutgefährdung und Wohnsituation, http://www.statistik.at/web_de/frageboegen/private_haushalte/eu_silc/index.html (accessed 05/09/2012)

Tirado, S. et al. (2012) Pobreza Energetica en Espana, Potencial te Generacion de empleo derevade de la rehabilitacion energetica de viviendas, REPEX

Todd, S. and Steele, A. (2006) Modelling a culturally sensitive approach to fuel poverty. Structural Survey, 24 (4): 300-310.

Thompson, H. (2011) Qualifying and quantifying fuel poverty across the European Union using consensual indicators. Submitted in part fulfilment of the requirements of the MRes in Social Policy, Department of Social Policy and Social Work, University of York

Waddams-Price et al (2007) Identifying Fuel Poverty Using Objective and Subjective Measures. Centre for Competition Policy, University of East Anglia, Norwich.

Walker, R. et al. (2012) Area-based targeting of fuel poverty in Northern Ireland: An evidenced-based approach. Applied Geography 34 (2012) 639-649

Interviews

	Name	Affiliation	Area of Expertise	Date	Location of Interview
1	Barteaux, Francoise	Université catholique de Louvain	FP in Belgium	13/08/12	Telephone
2	Berger, Thomas	Technical University of Graz	FP in Austria	13/07/12	Telephone (skype)
3	Boardman, Brenda	University of Oxford	FP in general / UK	17/07/12	Telephone
4	Bouzarovski, Stefan	University of Birmingham	FP in UK / Europe	18/07/12	Telephone
5	Brunner, Karl-Michael	Vienna University of Economics	FP in Austria	09/07/12	Vienna University of Economics
6	Campbell, Ron	National Energy Action	FP in the UK	13/07/12	Telephone
7	Dubois, Ute	ISG Business School Paris	FP in France	26/07/12	Telephone
8	Esquerra Alsius, Aniol	Ecoserveis	FP in Spain	30/08/12	Telephone
9	Müller, Mariella and Machatschke, Alexander	Caritas Austria	Poverty / FP in Austria	05/07/12	Caritas Austria, Vienna
10	Niedermühlbichler, Georg	Mieterverband Österreich (Austrian Tenants Association)	Housing (Policy) in Austria	30/07/12	Mieterverband Österreich (Austrian Tenants Association), Vienna
11	Steiner, Hans	Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection	Poverty in Austria	13/06/12	Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection
12	Thompson, Harriet	University of York	FP in UK / Europe	11/07/12	Telephone (skype)
13	Tirado Herrero, Sergio	Central European University Budapest	FP in Spain / Hungary	22/06/12	Telephone (skype)
14	Veigl Guthann, Christina	E-Control Austria (Austrian Energy Market Regulator)	Energy market / FP in Austria	25/07/12	E-Control Austria (Austrian Energy Market Regulator), Vienna

Abstract

The purpose of this dissertation is to identify characteristics and lessons learned from fuel poverty related policy in the UK and other European countries and apply them to the Austrian context. The UK provides a number of policy examples which offer different lessons learned. The overall strategy against fuel poverty lacked coherency, providing a number of uncoordinated policies with unclear goals. It is essential to note that in the bulk funding has been wasted on the most ineffectively targeted policy, as well as being income related, meaning the funds were not invested in the housing stock but are forever lost.

The other European countries analysed show a varying degree of recognition of fuel poverty ranging between recent political adoption of the concept to denial of its existence, and also offer interesting examples of fuel poverty related policy.

Austria is a highly federalised country which, together with a lack of clear departmental competences, may hamper policy making and implementation. An analysis of the Austrian housing stock show that there are quite significant differences to the UK, with a higher percentage of flats and people being more likely to rent. This might be a further argument to emphasise a localised approach involving local actors and know how, with a “on the doorstep” identification of fuel poor, rather than distributing funds to individual households.

The paper concludes with policy recommendations.