



The rationale for energy efficiency policy: Assessing the recognition of the multiple benefits of energy efficiency retrofit policy



Niall Kerr^{a,*}, Andy Gouldson^b, John Barrett^c

^a Infrastructure Business model for Local Delivery (I-Build), Sustainability Research Institute, School of Earth and Environment, University of Leeds, UK

^b ESRC Centre for Climate Change Economics and Policy, School of Earth and Environment, University of Leeds, UK

^c Sustainability Research Institute, School of Earth and Environment, University of Leeds, UK

ARTICLE INFO

Keywords:

Efficiency
Retrofit
Multiple-benefits
Agenda-setting
Policy rationale

ABSTRACT

The rationale for energy efficiency policy can be framed in terms of a variety of different benefits. This paper considers how different benefits have been used within the overall rationale for energy efficient retrofit policy in different contexts. We posit that different rationales may be used for the same policy response, and that the form of rationale used may affect the design, delivery or the level of policy support, with different rationales making it easier to account for different results. Considering retrofit policy in the contexts of the UK, Germany, New Zealand and Ireland, we characterise policy rationale in each case, assessing what the key perceived benefits have been, and whether they have changed over time. The analysis identifies some marked differences between cases with the recognition of benefits and the ensuing policy rationale resulting from a complex mix of political, social and economic influences. We find that recognition of multiple benefits may not equate with multiplied policy support, and instead it is more likely that different rationales will have relevance at different times, for different audiences. The findings highlight that, alongside evidence for policy, it is important to also consider how the overall rationale for policy is eventually framed.

1. Introduction

The more efficient use of energy is a policy concern in a variety of countries, for a variety of reasons. The International Energy Agency (IEA) has in recent years tried to highlight the importance of energy efficiency (EE) to its member states and to give it more priority has reframed it from being a 'hidden fuel' to being the 'first fuel' (IEA, 2014a). This focus is in part due to the perception that demand-side energy policy options have been overlooked in favour of supply-side options (Lazar and Colburn, 2013; Verbruggen, 2003) with a resultant bias toward investment in energy generation over energy demand reduction (IEA, 2015). The IEA estimate that with existing levels of policy support, two thirds of economically viable energy efficiency potential will remain un-tapped by 2035 (IEA, 2014b). The perceived lack of support for energy efficiency is attributed to a variety of its inherent features, including, the nature of its measurement i.e. measuring a negative value (energy savings), the resultant level of return on investment being considered very uncertain, and to the potential for various related rebound effects (Keay, 2011; Sorrell, 2015).

The apparent disregard for EE has resulted in reporting, directed at policy-makers, which focuses on its different perceived *benefits*. Reporting sometimes presents fresh evidence of benefits (Copenhagen Economics,

2012; Washan et al., 2014), and at other times synthesises existing evidence to present the case for policy support (IEA, 2014b; Lazar and Colburn, 2013). Many argue that there are multiple different benefits, and therefore potentially multiple different reasons for EE to be on the policy agenda, and some advocate a "multiple benefits approach to energy efficiency policy" (IEA, 2014b), highlighting that the perceived benefits are often not recognised equally or consistently in different national contexts. Ultimately this reporting seeks to expand policy makers' perspective beyond the existing rationale for policy, to include a recognition of additional benefits and thus potentially alter the associated policy support.

In light of calls for policy makers to recognise EE's 'multiple benefits', this paper will assess how much a selection of its perceived benefits have been used as the rationale for EE policy. We focus on a prevalent form of EE policy – energy efficiency retrofit of existing domestic buildings – and consider a selection of different national policy contexts. With activity in domestic buildings often responsible for a large proportion of overall national, territorial energy use (IEA, 2014a; Lucon et al., 2014), and existing building stocks forecast to compose the majority of the future stock for many decades to come in developed countries (Lucon et al., 2014; Royal Academy of Engineers, 2010; Schröder et al., 2011) energy efficient retrofit has moved onto the policy agenda of a variety of countries in recent years.

* Corresponding author.

E-mail addresses: n.kerr@leeds.ac.uk (N. Kerr), a.gouldson@leeds.ac.uk (A. Gouldson), j.r.barrett@leeds.ac.uk (J. Barrett).

The paper considers the extent to which the perceived benefits of carbon emission reduction, health/fuel poverty impacts, employment/fiscal effects and energy security have been employed as the rationale for retrofit policy, in the contexts of the UK, Germany, New Zealand and Ireland; 4 countries with similar economic and climatic backgrounds, where retrofit policy has existed for a number of years.

The paper seeks to describe the mix of perceived benefits that have been used in the overall rationale for policy, helping to bring retrofit on to the policy agenda in recent years. We attempt to explain why the perceived multiple benefits of energy efficiency retrofit may yield different rationales for the same policy response, in different national contexts. We also consider how the rationale may change over time and to what extent the multiple reasons for policy help to achieve multiplied policy support. Finally we consider whether the form of rationale used might influence the scale and substance of the policy implemented.

To achieve this, the paper firstly sets out the theories of agenda-setting that are used to structure the analysis. We then assesses the relevant background of each country, looking at its building stock, building energy use practises, existing policies and associated policy targets. We begin the assessment of policy rationale by considering the formal, stated reasons for policy as set out within policy impact assessments and related policy literature. We then expand on the formal rationale by carrying out a set of semi-structured interviews with relevant experts, and by considering other academic and grey literature from each country. The analysis seeks to contribute to the agenda-setting literature by considering how a particular policy response - retrofit - can be associated with potentially multiple policy benefits, and how this framing might influence its place on the political agenda.

2. Background

2.1. From co-benefits to multiple benefits

The benefits that are perceived to result from a particular policy response are contingent on the social, economic and political environment, the period of time in question and the actors involved. The idea of a policy response having a primary purpose, as well as a less recognised set of additional or 'co-benefits', has been seen in relation to climate change policy for a number of years (Aunan et al., 2004; Jakob, 2006; NEAA, 2009; Younger et al., 2008). The concept has a variety of handles including hidden benefits or non-energy benefits (ISSP, 2011; Schweitzer and Tonn, 2002), and its reporting has been cited as a means of improving the political acceptability of climate policy (Smith, 2013).

The identification of the co-benefits of climate policy has evolved in recent years into the framing of energy efficiency in terms of its 'multiple benefits', where there is not necessarily an emphasis on any particular benefit. The case for recognising the multiple benefits of energy efficiency has been made by multiple organisations (see ACEEE, 2015; ECEEE, 2014; IEA, 2014b; Lazar and Colburn, 2013; Ryan and Campbell, 2012), with some reports focusing specifically on the multiple benefits of retrofit (see Copenhagen Economics, 2012; Washan et al., 2014). A single policy issue being associated with a wide variety of benefits is a framing that is seen in relation to other policy areas, for example, with regard to cycling provision and hydraulic fracking (EAC, 2014; Raje and Saffrey, 2016).

2.2. Policy problems, policy solutions and the political agenda - Streams within a stream

What is considered a policy issue is "not self-evident", it may be contested, subjective and socially constructed (Wolman, 1981), whilst public policy *formulation* is notoriously inscrutable (Wu et al., 2012). "The cast of people trying to influence Government is vast" (Rose,

2005), with actors in the cast coming from within Government – the department facilitating the policy, the department controlling spending, relevant committees etc. – as well as external actors like lobbying NGOs and private companies. Actors may use evidence of the benefits of energy efficiency strategically, in order to aid their potentially pre-defined positions (Bernauer et al., 2004; Hertin et al., 2009). The process of assessing whether the reported benefits of policy form part of the rationale for a policy may be similarly inscrutable and non-self-evident (Kingdon, 1995).

In the vernacular of energy efficiency advocacy, different reasons for policy are articulated using the language of 'benefits'. Another way of viewing these 'benefits' is as policy problems to be addressed. Kingdon's (1995) seminal multiple streams framework for agenda-setting sets out that policy problems, policy solutions and political will are 'independent streams' which need to converge and create a 'policy window' in order for a particular issue to reach the political agenda (Sabatier and Weible, 2014). In light of the emergence of the multiple benefit framing of energy efficiency and in line with Kingdon's multiple streams framework, the analysis here considers the potential for multiple, diverse, policy problem streams - multiple benefits - to converge with a single policy solution stream – retrofit – to excite political will and move an issue onto the political agenda.

Using the logic of *agenda-shaping* (Tallberg, 2003), we consider the influence of the different policy problems on both bringing retrofit to the agenda – agenda setting – and on emphasising or de-emphasising retrofit's place on the agenda – agenda structuring – critically considering the policy dynamics (Baumgartner et al., 2006). In order to relate to the theoretical framing in this analysis we refer to retrofit policy as a 'policy solution', we do not, however, infer that any of the policies considered have *solved* their associated policy problems.

With the potential for multiple problems being associated with a single policy solution, we also consider whether the principle of 'problem load' – conventionally used to describe the bounded nature of the number of policy problems that can be addressed by policy makers at one time (Sabatier and Weible, 2014) – has relevance to the multiple benefit framing, and whether there is a limit to the number of problems that can be acceptably associated with a single policy solution at one time.

Finally, with there being potentially multiple reasons contributing to a single policy solution's overall rationale, we consider whether the rationale for policy may affect the scale and stability of the policy itself. The perceived benefits of retrofit cover a wide range of policy issues – here we focus on carbon emission reduction, fuel poverty/health, employment/fiscal effects and energy security. In this analysis we will compare rationales in terms of the extent to which they can be considered as economic – influencing the overall size of the costs and benefits and potentially 'adding value' to the economy – or as social – affecting matters of equity or how the costs and benefits are distributed. Although each of the perceived benefits highlighted for analysis here can be advocated in both economic and/or social terms, *the overall rationale and the policy design* may offer insights into the extent to which policy is expected to provide an economic return, or to address matters of social equity. As Radaelli observes with regard to the use of policy assessments "If more than one logic is at work... it becomes easier to account for different results" (Radaelli, 2005).

3. Methods

3.1. Case study criteria

Retrofit is more commonly a concern in countries where existing domestic buildings are relatively old and are expected to comprise the majority of the stock for many years to come. This analysis will be restricted to countries where retrofit of existing buildings is a higher priority, and which have similar economic backgrounds. In line with

Download English Version:

<https://daneshyari.com/en/article/5105791>

Download Persian Version:

<https://daneshyari.com/article/5105791>

[Daneshyari.com](https://daneshyari.com)