

# Understanding policy change: Energy Savings Obligations in the UK

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## Abstract

This paper looks at long-term change with regard to domestic energy efficiency policy. More specifically, it discusses how the principal policy instrument targeting energy use in homes in the UK changed over time. The UK was the first country in Europe that introduced obligations on suppliers to save energy at the customer end in 1994. Since then this policy changed rapidly and is now the principal instrument to deliver energy savings in the housing stock. This paper aims to answer three questions: First, how did the policy instrument change over time? Second, which long-term pressures caused such a remarkable shift and what were the key drivers of that change? Third, how did those pressures filter through the policy process and affect the energy savings obligations? The research is based on fifteen expert interviews in the UK covering all of the key stakeholders involved such as energy suppliers, government departments and agencies, researchers, and industry associations. Furthermore, a broad document analysis has been carried covering the years 1994-2010.

## 1 Introduction

Energy Savings Obligations (ESOs) on energy suppliers or distributors recently attracted significant attention, partly due to the draft of the EU Energy Efficiency Directive. The draft Directive proposes that all Member States would have to introduce such obligations in order to reduce energy demand, although it gives Member States the alternative to opt out by using other mechanisms. In the EU, the UK was the first country that put ESOs on energy suppliers and the UK model is often given as an example of how ESOs could work in practice. Generally, the UK Supplier Obligation (SO) is considered as a successful policy instrument.

The SO started back in 1994, around the time when energy markets were liberalised in the UK. Since then, it has become a high profile policy and is now the principal instrument to reduce carbon emissions in the UK housing stock. However, in the beginning the SO was not anywhere near the sort of reduction targets that it imposes on energy suppliers now. No one would have anticipated the remarkable change the SO has gone through over the last 18 years. This paper asks a simple question: How could a fairly modest policy instrument develop into the most important feature by far in the UK policy mix tackling carbon emissions in the domestic sector?

Following the logic of this question, the paper is structured along five distinct parts: First, the paper

introduces the basic architecture of the UK Supplier Obligation (SO). Second, an overview of its change over time is presented. Third, the paper offers an indicative evaluation in terms of the achieved energy and carbon savings to illustrate the effects of the modifications as well as the significance of the instrument. Fourth, the patterns and drivers of policy change are analysed in detail focusing on six key areas. Finally, a concluding section sums up which drivers may help explaining the policy change experienced in the UK and provides an outlook into the future of the SO.

## 2 The UK Supplier Obligation

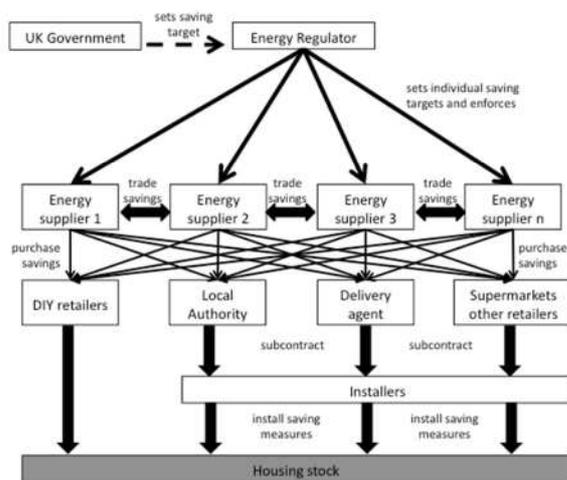
In the UK, the Supplier Obligation (SO) is the most important instrument to deliver energy and carbon savings in the domestic sector (OFGEM, 2005). Both the 2004 and 2007 Energy Efficiency Action Plan highlight the SO as the principal policy mechanism to deliver energy savings in the domestic sector (DEFRA, 2007, 2004).

The basic concept of the SO is that Government imposes a savings target on energy companies that has to be achieved at the customer end. This target may relate to energy consumption or carbon emissions. In the UK, the target is set by the Department of Energy and Climate Change (DECC) for a defined period of time. The energy regulator, OFGEM, is responsible for administering the SO and enforcing it, OFGEM defines individual savings targets for each energy company. The energy companies then contract installers of energy saving measures that carry out the work in homes according to a defined standard and with a certain benchmark for energy and / or carbon savings. The most common routes for this are through delivery agents, Local Authorities, supermarkets and other retailers, or provision via DIY retailers. Alternatively, energy companies may choose to work with the occupants directly. In the past, energy companies have for example promoted the use of compact fluorescent lamps (CFLs) via mass mail-outs of free light bulbs, although this is now prohibited. More recently, some energy companies, such as British Gas, set up their own insulation business and deliver most of their obligation themselves. Businesses and industrial end-users are not covered by the scheme, they are targeted by other policy instruments such as the Climate Change Levy and Climate Change Agreements as well as the recently introduced Carbon Reduction Commitment.

Figure 1 sketches the basic architecture of the SO. While there was a succession of different SO schemes, the basic logic remained the same. The first SO scheme was called Energy Efficiency Standards of Performance (EESoP) and ran from 1994 to 1998. Its successors, EESoP 2 and EESoP 3, ran from 1998 to 2000 and from 2000 to 2002 respectively. In 2002, the scheme's name was changed to Energy Efficiency Commitment (EEC). EEC 1 was in place from 2002 to 2005 and EEC 2

from 2005 to 2008. EEC was eventually renamed in 2008 to the Carbon Emissions Reduction Target (CERT) that runs from 2008 to 2012.

**Figure 1: Architecture of the SO**



Source: based on Rosenow (2011)

For the post-CERT period a new scheme, called Energy Company Obligation (ECO), is planned. In some instances the name change reflected changes of the SO such as a change of focus from energy to carbon emissions when CERT was introduced (see more details below), but generally it the changing names should not be overrated.

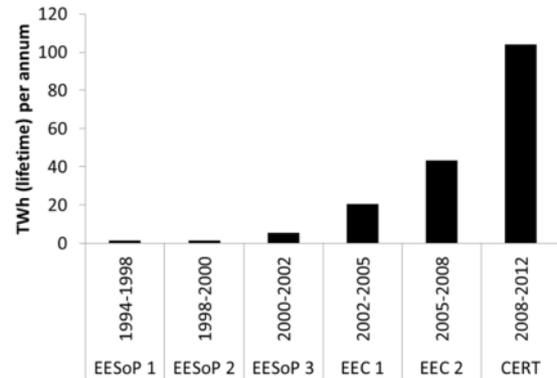
### 3 Main changes of the SO

#### 3.1 Target

To sum it up, there were two substantial changes: First, the energy savings target was raised significantly since 1994. Second, the target definition changed.

The total energy saving target of the SO in 1994-1998 and 2008-2012 cannot be directly compared, because the EESoP 1 target was defined in term of energy to be saved, whereas CERT defines the target in Mt CO<sub>2</sub>. According to OFGEM (2008c), the CERT target is equivalent to doubling the target under EEC 2, which was 130 TWh. Taking into account the 20% uplift in September 2008 and the extension of the scheme to December 2012, the total (implicit) energy savings target of CERT is almost 500 TWh. That means that the original SO target increased eightyfold from 1994-1998 to 2008-2012. However, these figures are again not directly comparable, because the length of the different schemes differs. Therefore an average annual energy savings target is calculated that allows direct comparison of the schemes (see figure below).

**Figure 2: Annual energy savings target of SO in TWh**



Source: based on various reports (DEFRA, 2008, OFFER, 1998, OFGEM, 2009a, OFGEM, 2009b, OFGEM, 2008b, OFGEM, 2005, OFGEM and Energy Saving Trust, 2003)

The implicit *annual* energy savings targets increased almost seventyfold from 1994-1998 to 2008-2012. However, there are further caveats to comparing the targets on a like-for-like basis. The target definition changed over time. Under EESoP 1 and 2, the target only related to electricity. EESoP 3 set a target for both electricity and gas separately. The EEC 1 and 2 targets were fuel standardised, allowing suppliers to achieve savings in homes heated by gas, electricity, coal, oil or LPG. Energy savings were carbon weighted and discounted in line with the HM Treasury Green Book, although the rate changed over time (guidelines for carrying out cost-benefit analysis). CERT then changed the target from energy to carbon emissions and abolished the discounting procedure (OFGEM, 2009a). All this makes it difficult to compare the targets on a like-for-like basis. However, the magnitude of target change is still remarkable.

#### 3.2 Cost of programme

As a result of increasing targets, the cost of the programme to energy suppliers went up from just £101.7 million in EESoP 1 (£25 million per year) to £5.5 billion in CERT (£1.2 billion per year). While EESoP 1 and 2 obliged energy suppliers to spend a certain amount of money, later versions of the SO only provided indicative figures that were nonbinding. Suppliers passed on the costs of the SO to their customers. While the expenditure allowance was subject to supply price control (and the 1998 supply price restraint) in earlier versions of the SO (EESoP 1 and 2), prescribing the maximum that could be charged, expenditure in later versions did not fall under such tight control and only indicative figures were provided. The average bill did increase by only £1 per household per year during the EESoP schemes, but by more than £50 per household per year under CERT, meaning a fiftyfold increase over 18 years.

### 3.3 Other

While the overall ambition and cost of the SO is probably the most remarkable change, there were other modifications that are notable:

- The first three SO schemes did not set a specific target for disadvantaged customers. However, EEC 1 was the first scheme that put in place a target for the so-called Priority Group, the defined group of disadvantaged customer. 50% of all savings had to be achieved within the Priority Group (OFGEM, 2001). This target did not change in EEC 2 (OFGEM, 2004). However, under CERT the target was reduced to 40% (OFGEM, 2009b).
- EESoP 1-3 did not allow trading of energy savings between suppliers. Trading of energy saving obligations was first allowed in EEC 1. Suppliers were allowed to buy certificates from or sell those to other suppliers. However, trading did not play a major role, and only very few suppliers trades parts of their individual targets.
- Since EESoP 3 suppliers are allowed to carry over energy savings from one SO period to another. In the beginning this was limited to 10% of the target, but this limit was abolished with the inception of EEC 1.
- Later versions of the SO also allowed the energy suppliers to use non-energy efficiency measures such as micro-renewables, but so far this was, and still is, at a very low level. Also, both ground and air source heat pumps were used as part of the heating measures, but only contributed a small proportion to the total savings achieved.
- As part of the CERT extension and for the first time since the inception of the SO, Government decided to set a minimum share for insulation measures. Subsequently, suppliers were required to achieve 68% of the target under CERT by investing in insulation measures.

Note that there were many other changes that happened and the above list is not comprehensive.

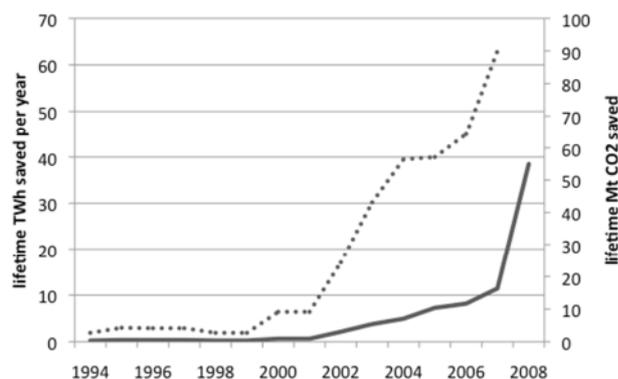
### 4 Brief evaluation of the programme

From the inception of the SO there were requirements to undertake monitoring of the measures installed in order to check that the energy savings assumed were in line with the actual savings achieved. A sample of all households that received energy efficiency measures had to be monitored during all obligation periods of the scheme. For the purpose of this paper, the following sources have been used for the evaluation: EESoP 1-3 (OFGEM and Energy Saving Trust, 2003); EEC 1 (OFGEM, 2005); EEC 2 (OFGEM, 2006, OFGEM, 2008b); CERT (OFGEM, 2009b). The figures used for EEC 2 and CERT do not include the energy and carbon savings carried over from previous obligation periods; only those savings actually achieved under the respective

scheme are considered. Savings under EEC 2 are only reported in TWh, and conversion factors from the Department for Environment, Food and Rural Affairs (DEFRA) have been used to convert energy savings in carbon savings taking into account the proportion of different fuels saved as reported by OFGEM. In order to get annual figures for saved carbon emissions the stated carbon savings of EESoP 1-3 and EEC 1-2 were prorated according to annual energy savings, for CERT saved carbon emissions have been reported on an annual basis by OFGEM.

The figures are not readily comparable for several reasons: First, the evaluation methodology applied changed over time (for example, energy savings were discounted under early versions of the SO, but this is not any longer done). Second, the figures calculated for this paper are based on the assumptions outlined above and need to be revised for a like-for-like comparison. However, the purpose of this section is to give a general estimate of the energy and carbon savings achieved and the figures calculated should suffice (Figure 3).

**Figure 3: CO<sub>2</sub>-emissions in mt lifetime emissions and TWh saved per year**



Source: own calculations based on various sources (Clausnitzer et al., 2007, Clausnitzer et al., 2008, Clausnitzer et al., 2009, Doll et al., 2008, IER and PROGNOSE, 2004, Kleemann et al., 2003, Kleemann and Hansen, 2005, Kuckshinrichs et al., 2010, OFGEM and Energy Saving Trust, 2003, OFGEM, 2005, OFGEM, 2006, OFGEM, 2008b, OFGEM, 2009b)

From 2002 to 2008, about 2 billion Euros were spent by energy suppliers as a result of the SO (estimate based on indicative figures provided by various OFGEM reports cited below Figure 2). This is equivalent to about 18 Euros per tonne of carbon mitigated. It does not, however, take into account the saved energy costs. Subtracting energy costs would lead to a much lower figure and probably negative cost.

### 5 Key drivers of change

This section sets out in more detail six of the key pressures that contributed to the remarkable change of the SO, namely market liberalisation and ideas around Least Cost Planning, climate change,

rising energy prices, change of key personnel, venue change, and fuel poverty.

## **5.1 Market liberalisation and Least Cost Planning**

The beginnings of the SO can be found in the late 1980s and early 1990s. In the early 1980s, the new 'neoliberal energy paradigm' (Fudge et al., 2011) or the 'new utility regulatory regime' (Helm, 2002) began to take shape and the newly elected Conservative government saw its task 'to set a framework which will ensure that the market operates in the energy sector with a minimum of distortion and energy is produced and consumed efficiently' (Lawson, 1982). So energy efficiency was very much a means to achieve economic efficiency and maximise economic productivity of the economy at the time and it was not debated in the context of reducing carbon emissions as it is today. The arrival of the new government was followed by initiatives to liberalise the markets for energy and open them up for competition, as this was seen as the most suitable way of achieving efficient supply and consumption of energy (Helm, 2003). In 1986, British Gas was privatised in the Gas Act 1986, followed by electricity in 1990 and the Electricity Act 1989.

As a result of the energy market liberalisation in the 1980s two independent regulators were created: the Office of Electricity Regulation (OFFER) and the Office of Gas Supply (OFGAS). Their primary duty was to develop competitive markets and regulate prices in those areas where competition was not feasible (e.g. natural monopolies) (Owen, 2006). The 1986 Gas Act also put a 'duty to promote the efficient use of gas' on OFGAS. The 1989 Electricity Act made provisions for OFFER to 'determine ... standards of performance in connection with the promotion of the efficient use of electricity by consumers as ... ought to be achieved by ... suppliers'. Hence, the promotion of energy efficiency was part of the primary legislation and regulators had the task to ensure energy was supplied and consumed efficiently. There was the assumption that once energy markets were fully liberalised energy efficiency services would be offered by the energy companies as part of their portfolio to compete against each other. However, until full competition was actually reached some sort of intervention by the regulator to encourage greater efficiency on the demand side was deemed acceptable. Therefore, a lot of the discussions at the time were framed in a language of competition and economic efficiency.

As a result of those debates in the 1980s, there was considerable interest in instruments to incentivise energy efficiency and in particular in the so called Least-Cost-Planning approach (LCP), which was used in the US for encouraging utilities to take into account the demand side and potential energy savings option at the customer end. The concept of LCP was originally coined by the former director of

the Office of Conservation at the US Department of Energy, Roger Sant (1979). In short, LCP is based on the assumption that people do not want to buy energy, but energy services, and those should be provided at lowest cost. Where it is cheaper to save a unit of energy rather than supplying it, utilities should opt for the demand reduction option and vice versa. It is easy to see why this particular policy instrument generated a lot of interest in the UK as it fitted very well with the dominant way of thinking at the time.

This idea of using utilities as the agents to roll out energy efficiency programmes was discussed in the UK context. For example, in the mid 1980s, in a series of reports called 'Lessons from America', the Association for the Conservation of Energy (ACE) presented the US way of approaching energy efficiency in utility regulation. The idea of using a LCP-type instrument in the UK was investigated further, for example in a report by ACE commissioned by OFGAS, that generally deemed such an approach suitable and beneficial (Brown, 1990). It also featured in an OFFER consultation on energy efficiency (OFFER, 1991), although it was argued in the document that LCP might not fit with the UK context that well mainly because there was competition in supply.

However, the LCP approach using utilities was endorsed by the House of Commons Environment Committee in a report on energy efficiency which viewed 'energy utilities and their regulators as key players in funding and implementing energy efficiency programmes' and called for 'a fundamental shift in attitudes and approach on the part of the utilities and other power generators' (House of Commons Environment Committee, 1993a, para 5). The Committee also travelled to the US to study LCP policies in various US states. NGOs such as Friends of the Earth and Greenpeace supported the LCP approach and the idea of using utilities as vehicles for the delivery of energy efficiency programmes. While British Gas clearly resisted any move into the direction of LCP, the electricity utilities reacted more measured with some utilities such as East Midlands Electricity and Manweb supporting LCP and carrying out pilot projects in that area. Other electricity utilities, such as South Western Electricity and Eastern Electricity, were more concerned and reluctant to embrace the concept of LCP (House of Commons Environment Committee, 1993a).

The discussions bore fruit and according to the second year report on the Environment White Paper, Government saw utilities in a good position to carry out energy efficiency measures at the customer end (HM Government, 1992).

## **5.2 Climate change**

Climate change became much more high profile in the UK over the last two decades and emerged as a distinct policy area after Margaret Thatcher mentioned climate change as a substantial

challenge to mankind in her 1988 landmark speech to the Royal Society (Pearce, 2006). Her speech was a sharp turning point in her government's approach towards environmental policy and drew the public's attention to the issue of climate change (Anderson, 1991). However, while the issue of climate change was around in the early 1990s, it was not a major driver of the SO in the early 1990s, although the first British SO, EESoP1, was partly introduced as a result of national climate policy: together with the E-factor (an energy efficiency price premium for gas), EESoP 1 was supposed to raise money for the Energy Saving Trust (EST) that was established by government, British Gas, and public electricity supply companies in 1992 to reduce home energy use and the associated carbon emissions. The EST played a key role in the Government's climate policy strategy for the domestic sector as outlined in the 1994 UK Climate Change Program (HM Government, 1994).

The importance of climate change as a driver started to increase at the end of the late 1990s: Following the 1997 election, the 2000 Climate Change Programme committed the UK to a 20% reduction of carbon emissions by 2010 based on 1990 levels. The Programme explicitly mentions the SO as one of the six key UK policy measures to save carbon (DETR, 2000). However, at the time the targets were comparably humble and nothing of the scale seen later in the 2000s. The idea of having more long term targets was not around at that time and it took some time until climate change targets became much more ambitious.

The starting point to this is probably a report published by the Royal Commission on Environmental Pollution in 2000 on energy and climate change which recommended a 60% reduction in carbon emissions by 2050 based on 1990 levels. The same figure also featured as an indicative target in the 2003 Energy White Paper that stressed that in order to achieve that sort of scale of reduction, the SO 'will have a major role to play in homes' (DTI, 2003, p. 34).

The growing importance of climate change as a political driver was also reflected in a modification of the metric: Under EESoP 1-3 the target was simply defined in kWh savings to be achieved (although it was an indicative target, the actual target was set in £ per customer per year). EEC 1 introduced a target with fuel weighted kWh, i.e. it depended on the carbon intensity of the fuel saved how much it would count towards the target. So effectively, EEC 1 introduced a carbon target. From EEC 1 onwards, climate change appears to be the strongest driver and the UK carbon targets put pressure on the government departments to deliver a substantial contribution to the targets via the SO.

Going forward, the SO remained a key element in the government's climate change strategy. The SO featured among the top three additional measures

to save carbon across all sectors in the 2006 Climate Change Programme (HM Government, 2006). This was also confirmed in the 2007 Energy White Paper: Government expected that in 2020 the SO would deliver up to 17% of all carbon reduction measures planned at the time, making it the second most significant measure after the EU emissions trading scheme. The White Paper highlights the government's commitment to continue delivering carbon savings in the household sector via the SO until at least 2020 (DTI, 2007).

Finally, in order to align the SO with the wider climate policy landscape, the metric of the SO changed from TWh to carbon emissions when CERT commenced in 2008. The Climate Change and Sustainable Energy Act 2006 gave powers to the government to set the obligations in the form of a carbon emissions reduction target.

### **5.3 Rising energy prices**

In the 1980s and 1990s, energy prices were low compared to the 2000s with the general trend of falling prices since the early 1980s. However, from 2002/2003 onwards energy prices of all fuels increased dramatically. Gas prices in real terms almost doubled in just a decade, prices for coal and smokeless fuels increased by 65%, and electricity prices by 45% (DECC, 2011).

The rising energy prices particularly affected the SO in 2008, when prices increased more rapidly than any increase since the 1973 oil crisis. Residential gas prices in 2008 increased almost by 50% in real terms in just four quarters. This was a result of rising wholesale gas prices in continental Europe, where gas prices are contractually linked to oil prices. Similarly, electricity prices went up by almost 30%, also mainly due to rising wholesale gas prices. In the context of increasing energy bills, there were calls in early 2008 for a windfall tax on energy suppliers. A heated discussion started after OFGEM reported to the Treasury and the Committee on Business and Enterprise that energy companies made £9 billion profit from EU ETS permits which were issued for free. In January 2008, OFGEM proposed a windfall tax on the major energy suppliers to help the fuel poor (OFGEM, 2008a). Just a few weeks after the OFGEM proposal, Government held a meeting with the heads of major energy suppliers and told them that they might face a levy on their profits to help the poor. As expected, the proposals were not met with great enthusiasm by the energy suppliers.

There was, however, no agreement in Government on the matter - Chancellor Alistair Darling and John Hutton, the Business Secretary, opposed a windfall tax on the basis that energy companies needed extra funds to expand low carbon energy sources. More than 70 Labour MPs signed a petition that called for a windfall tax and hoped to make the issue one of the dominating themes of the party's annual conference in September. In early August

2008, Government examined different alternatives to a windfall tax. One of them was to oblige energy companies to spend the bulk of the money under CERT in the first two years, and also to increase the share spent on helping the fuel poor. Raising the proportion of auctioned EU ETS permits and a carbon levy was also considered. On 11 September 2008, Government finally revealed the package they negotiated with the energy companies – the Home Energy Saving Programme. The package included an increase in the existing CERT target by 20% with a new target of 185 million lifetime tonnes of CO<sub>2</sub> for the period April 2008 - March 2011. That implied additional expenditure by the energy suppliers of an estimated £560 million (HM Government, 2008). Government argued that the programme had advantages over a windfall tax and that ‘by choosing this route the Government can more swiftly help families cut fuel bills now and in the medium term; help secure the long-term investment in new low-carbon energy infrastructure this country requires; and help keep prices down’ (HM Government, 2008, p. 2).

Interestingly, raising the SO target by 20% initially led to an *increase* of energy prices as suppliers are allowed to simply pass through the costs of the SO to the energy customers. Therefore, the move had no significant financial impact (if at all) on energy suppliers’ profits (which was the focal point of the debate). Government presented the decision as if energy suppliers had to spend an additional £1 billion on energy efficiency without mentioning that consumers were to pay for this in the end. It seems that energy companies’ pleas for not putting a windfall tax on them because they desperately needed to invest in new infrastructure convinced the government.

#### **5.4 Venue change**

One of the levers of policy change discussed in the literature on the theory of policy change is the so-called venue change. Venue change refers to situations when the institutional location of decision authority changes (Baumgartner and Jones, 1993). Such a venue change occurred in the UK in 2000:

In 1994, the electricity regulator, OFFER, put energy efficiency standards of performance (EESoP) on the Public Electricity Suppliers (PESs), the fourteen companies created when the electricity market in the United Kingdom was privatised in 1990. Over a 4-year period EESoP 1 raised about £100 million for energy efficiency projects, equivalent to £1 per customer per year (Owen, 1997). However, OFFER did not raise the amount of money expected by ministers, and OFFER’s Director General had concerns that higher obligations ‘would raise issues more appropriately dealt with through general fiscal policy’ (ENDS, 1994). Also the second EESoP scheme, which operated from 1998-2000, did not raise significantly more funds than EESoP 1. Using

similar arguments, OFGAS rejected such a scheme for the gas sector entirely (see more details in section on change of key personnel). Without changes in primary legislation it looked like further measures would be extremely difficult to implement. The new Labour Government that came into power in 1997 announced a review of utility regulations. In 2000, the proposals took shape and were passed through parliament as part of the Utility Bill. The Bill gave the Secretary of State powers, by order, to impose energy savings targets on gas and electricity utilities. This resolved some of the conflicts over the first SO schemes, which struggled to get regulators’ support due to conflicting duties and unclear responsibilities. The Utilities Bill directed the responsibility for target setting to Government and obliged the regulator to implement the schemes that would be needed to reach the targets. This enabled Government to significantly extend EESoP, imposing much more ambitious targets on energy companies. Government set the first target in the Electricity and Gas (Energy Efficiency Obligations) Order 2001. The target of the old EESoP 3 scheme was only 11 TWh (4.9 TWh Electricity & 6.1 TWh Gas), whereas its successor, EEC 1, put a much higher target of 62 TWh on energy suppliers (OFGEM, 2005).

The venue change that occurred in Britain resulted from a lengthy political debate about the role of the energy regulators and their unwillingness to increase expenditure for energy efficiency measures. In order to realise substantial carbon emission reductions in the domestic sector modifying the institutional framework appeared to be the only option. Hence the venue change was a deliberate means to achieve carbon reduction goals in the housing sector rather than an unrelated coincidence.

#### **5.5 Change of key personnel**

Change of key personnel can trigger policy change in some instances and is a recognised mechanism in the literature on policy change (e.g. Sabatier, 1988). A good example of the impact of changing key personnel affecting the dynamics of policy change can be found in the UK during EESoP 1 and 2: In the 1990s, when the SO was still run entirely by the regulator (including the target setting procedure), change of personnel at the top of the regulator OFGAS had a significant effect on the development of the SO. The following part shows how a single person, Claire Spottiswoode, who became director of OFGAS in 1993, successfully blocked any attempts of implementing a SO in the gas sector and downgraded the E factor significantly. In contrast, OFFER’s director was much more sympathetic to running energy efficiency programmes and put in place the first SO in electricity in 1994. Only when a new OFGAS director was appointed, the way was finally cleared for having a SO in gas as well.

In 1991, Sir James McKinnon, the Director General of OFGAS, announced a new gas price control formula to operate from 1992. This formula would include an 'E-factor' allowing gas suppliers to pass 100% of the costs of energy efficiency projects approved by the Director General through to gas customers. McKinnon expected that around £50 million a year might be spent on energy efficiency measures (Owen, 2006). Money raised via the E factor was supposed to help fund the Energy Saving Trust (EST) that was established by Government, British Gas and public electricity supply companies in 1992 to reduce home energy use and the associated carbon emissions (Owen, 1997). Although OFGAS established the E factor, the regulator made it pretty clear from the beginning that it did not see wider environmental goals within its remit and this ought to be dealt with by central government (House of Commons Environment Committee, 1993b). This would become an issue of great controversy later on.

The story took a very different turn when McKinnon left office in 1993 and Claire Spottiswoode took over. As a result of her appointment, in November 1993, there were serious concerns that not enough money could be raised for EST making it impossible for the Agency to deliver the CO<sub>2</sub> savings promised in the Climate Change Programme. Claire Spottiswoode rejected raising money via the E factor for energy efficiency measures administered by EST. While the 1986 Gas Act did provide some leverage for OFGAS to support energy efficiency measures, Spottiswoode did not feel comfortable raising prices (OFGAS, 1994). Spottiswoode took the view that one should not interfere with the purity of the market with cross-subsidies of this kind. Once the market was fully liberalised, she argued, energy efficiency measures would just be offered by the energy companies as part of a competitive market offering and consumers were best placed to decide whether they wanted energy efficiency measures or not. Spottiswoode expected that to happen in 1998, when the whole of the gas market had been opened to competition. Only in the meantime, she argued, there would be some, but a very limited, role for energy efficiency measures as encouraged by the E factor (OFGAS, 1994). As a result, British Gas submitted a greatly scaled down package of EST projects to OFGAS, but most of their proposals were subsequently rejected by the regulator. In the end less than £2 million compared to the £50 million announced by McKinnon was spent by the time the E factor had ended in March 1997 (Owen, 2006). Following the same logic of argument, Spottiswoode also declined to put an obligation similar to EESoP on gas suppliers. There was the feeling that without reforming the primary legislation, i.e. the 1986 Gas Act, further energy efficiency programmes that involved gas suppliers would be very unlikely.

The appointment of a new OFGAS director would eventually break the deadlock. Finally, in September 1998, Claire Spottiswoode's term as Director General of OFGAS came to an end and Callum McCarthy was appointed to be her successor. From the beginning on, McCarthy was much more sympathetic to having schemes such as the SO in gas and subsequently extended the SO to the gas sector.

## **5.6 Fuel poverty**

While there is fuel poverty in a lot of European countries, the issue was always much higher up on the agenda in Britain, where fuel poverty is an important driver of energy efficiency policy, and became a distinct issue of public concern following the oil crisis in 1973-1974. Fuel poverty in the UK is defined as the need to spend more than 10% of household income on all energy use in order to maintain a satisfactory heating regime and other energy services (Boardman, 1991). The importance of fuel poverty for the energy efficiency debate is manifested in the launch of the UK Fuel Poverty Strategy in 2001. The SO was always supposed to help those living in fuel poverty, but only the implementation of EEC 1 required suppliers to spend a fixed proportion of money on energy efficiency measures in homes of disadvantaged customers in the so-called Priority Group. Although CERT reduced the Priority Group target from 50% to 40%, the recent extension of CERT to 2012 also included provisions for a Super Priority Group, i.e. the most disadvantaged customers within the Priority Group.

## **5.7 Other drivers**

There are other drivers that have not been touched on so far in the above. Among them are policy feedback effects for example in the form of a growing energy efficiency industry putting pressure on government to increase the SO targets, policy learning and growing confidence that the scheme works, and path dependency in the sense that there is a tendency to stick with those policy instruments already in place. However, there is limited space to cover all of these drivers in this paper.

## **6 Conclusion**

This paper sketched the development of the principal home energy efficiency policy instruments in the UK from its inception identifying some, but not all, driving forces that impacted on policy change. The SO shows remarkable and frequent changes in its development, and arguably few people would have expected the scheme ever reaching the scale it reached in recent years.

While the SO was initially driven by attempts to incentivise the efficient consumption of energy at a time of market liberalisation, other issues such as climate change, rising energy prices, and fuel

poverty became more and more important over time. In addition, changes in institutional structures and key personnel had a significant impact on the SO.

The question remains whether the trend of ever increasing targets will continue in the future given that rising targets also mean a higher contribution by households on their bills particularly because the potential for low cost measures will at some point be depleted. According to a recent government consultation, the successor of the current SO will set a target equivalent to expenditure levels slightly higher than those generated at the moment. However, the carbon target is supposed to be much lower due to a redirection of the SO from low cost measures to more high cost measures and the introduction of new policy instruments to incentive the low cost measures. Whether this will happen is still out in the open, but it could have a significant effect on the SO once again.

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