

<b>Title:</b> <b>The Warm Home Discount Scheme</b> <b>Lead department or agency:</b> Department of Energy and Climate Change <b>Other departments or agencies:</b>	<b>Impact Assessment (IA)</b>
	<b>IA No:</b> DECC0027
	<b>Date:</b> 23/02/2011
	<b>Stage:</b> Final
	<b>Source of intervention:</b> Domestic
	<b>Type of measure:</b> Secondary legislation
	<b>Contact for enquiries:</b> samuel.jenkins@decc.gsi.gov.uk

## Summary: Intervention and Options

### What is the problem under consideration? Why is government intervention necessary?

Households that need to spend 10% or more of their income to adequately heat their homes are defined as being in fuel poverty. The number of fuel poor households in the UK has doubled since 2003, mainly as a result of rising energy prices. The most cost-effective method of reducing fuel poverty is generally through improving the thermal efficiency of homes. However, upgrading the housing stock is a gradual process, and in the interim the provision of support through energy bills can remove a significant number of households from fuel poverty. An existing voluntary agreement between the Government and major energy suppliers to provide support ends in March 2011. Government intervention is required to ensure that support through bills continues to be provided to vulnerable households.

### What are the policy objectives and the intended effects?

The policy aims to:

- 1) remove a significant number of households from fuel poverty by providing support to vulnerable households through energy bills, while minimising the impact on competition within the energy markets, and ensuring households retain the incentive to actively engage in the energy market; and
- 2) Alleviate some of the distributional impacts of higher energy bills on low-income and vulnerable households.

### What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Do Nothing - the existing voluntary agreement for energy suppliers to provide support on bills would elapse  
 Policy Option 1: Set a total level of mandated expenditure on support for households through energy bills for energy suppliers. Energy suppliers would be mandated to spend a specified amount on support for vulnerable households. Government would not specify target groups for receipt of support, how the support should be provided, or the level of support for each household.

Policy Option 2: Introduce the Warm Home Discount scheme. Energy suppliers would be mandated to provide support to specified expenditure levels. Government would also oblige suppliers to direct support to certain vulnerable groups, and provide guidance on the level and form of the support paid to households. This is the preferred option as it will allow support through bills to be provided to vulnerable households in a targeted and consistent form.

**Will the policy be reviewed?** It will be reviewed. **If applicable, set review date:** 10/2012

**What is the basis for this review?** PIR. **If applicable, set sunset clause date:** N/A

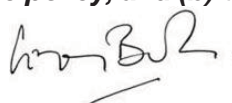
**Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?**

Yes

**Ministerial Sign-off** For final proposal stage Impact Assessments:

*I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.*

Signed by the responsible Minister:



Date: 18 February 2011

# Summary: Analysis and Evidence

# Policy Option 1

## Description:

Set a total level of mandated expenditure for energy suppliers to provide support through energy bills

Price Base Year 2009	PV Base Year 2010	Time Period Years 5	Net Benefit (Present Value (PV)) (£m)		
			Low: 37	High: 400	Best Estimate: 192

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low		266	1,224
High		346	1,587
Best Estimate	1.6	312	1,431

### Description and scale of key monetised costs by 'main affected groups'

Equity-weighted value of transfer from non-recipients as suppliers recoup the benefits paid: PV £1,160m; Value of change in fuel consumption: PV £164m; Value of change in greenhouse gas emissions: PV £71m; Value of change in air quality: PV £14m; Administrative costs to Government: PV £5m, Direct costs to business: PV £17m.

### Other key non-monetised costs by 'main affected groups'

None identified.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			
High			
Best Estimate	None	354	1,624

### Description and scale of key monetised benefits by 'main affected groups'

Equity-weighted value of transfer to recipient households: PV £1,624m.

### Other key non-monetised benefits by 'main affected groups'

Net reduction in the number of households in fuel poverty - 2011/12: 41,000, 2012/13: 46,000, 2013/14: 55,000, 2014/15: 58,000;  
Reduction in the number of households in extreme fuel poverty - 2011/12: 21,000, 2012/13: 28,000, 2013/14: 18,000, 2014/15: 19,000;  
Improvements in physical and mental health of recipient households through increase in thermal comfort.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5

All non-administrative costs are passed on to all customers through overall energy bills, using average split between heating and non-heating final domestic energy demand;  
Recipients of support through bills increase their demand for heating fuels only;  
The responsiveness of household energy demand to changes in energy bills are based on evidence from a published non-Government source.

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: 3.6	Benefits: 0	Net: -3.6	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?			Great Britain		
From what date will the policy be implemented?			01/04/2011		
Which organisation(s) will enforce the policy?			OFGEM		
What is the annual change in enforcement cost (£m)?			1.0		
Does enforcement comply with Hampton principles?			Yes		
Does implementation go beyond minimum EU requirements?			Yes		
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)			<b>Traded:</b> -0.005	<b>Non-traded:</b> 1.424	
Does the proposal have an impact on competition?			Yes		
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?			<b>Costs:</b> 0%	<b>Benefits:</b> 0%	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	<b>Micro</b> 0	<b>&lt; 20</b> 0	<b>Small</b> 0	<b>Medium</b> 0	<b>Large</b> 100%
Are any of these organisations exempt?	Yes	Yes	Yes	Yes	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	Yes	37
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	Yes	32
Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	33
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	Yes	36
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	Yes	34
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	Yes	36
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# Summary: Analysis and Evidence

# Policy Option 2

## Description:

Introduce the Warm Home Discount Scheme

Price Base Year 2009	PV Base Year 2010	Time Period Years 5	Net Benefit (Present Value (PV)) (£m)		
			Low: 470	High: 881	Best Estimate: 651

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low		274	1,258
High		364	1,669
Best Estimate	1.3	324	1,488

### Description and scale of key monetised costs by 'main affected groups'

Equity-weighted value of transfer from non-recipients as suppliers recoup the benefits paid: PV £1,163m; Value of change in fuel consumption: PV £185m; Value of change in greenhouse gas emissions: PV £80m; Value of change in air quality: PV £16m; Administrative costs to Government: PV £23m, Direct costs to business: PV £22m.

### Other key non-monetised costs by 'main affected groups'

None identified.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			
High			
Best Estimate	None	467	2,139

### Description and scale of key monetised benefits by 'main affected groups'

Equity-weighted value of transfer to recipient households: PV £2,139m.

### Other key non-monetised benefits by 'main affected groups'

Reduction in the number of households in fuel poverty - 2011/12: 88,000, 2012/13: 87,000, 2013/14: 102,000, 2014/15: 98,000;  
Reduction in the number of households in extreme fuel poverty - 2011/12: 48,000, 2012/13: 55,000, 2013/14: 47,000, 2014/15: 49,000;  
Improvements in physical and mental health of recipient households through increase in thermal comfort.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5

All non-administrative costs are passed on to all customers through overall energy bills, using average split between heating and non-heating final domestic energy demand;  
Recipients of support through bills increase their demand for heating fuels only;  
The responsiveness of household energy demand to changes in energy bills are based on evidence from a published non-Government source.

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: 4.8	Benefits: 0	Net: -4.8	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?		Great Britain			
From what date will the policy be implemented?		01/04/2011			
Which organisation(s) will enforce the policy?		OFGEM			
What is the annual change in enforcement cost (£m)?		1.0			
Does enforcement comply with Hampton principles?		Yes			
Does implementation go beyond minimum EU requirements?		Yes			
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)		Traded: 0.000		Non-traded: 1.598	
Does the proposal have an impact on competition?		Yes			
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?		Costs: 0%		Benefits: 0%	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro 0	< 20 0	Small 0	Medium 0	Large 100%
Are any of these organisations exempt?	Yes	Yes	Yes	Yes	No

## Specific Impact Tests: Checklist

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Small firms <a href="#">Small Firms Impact Test guidance</a>	Yes	33
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	Yes	36
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	Yes	34
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	Yes	36
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

## Evidence Base (for summary sheets) – Notes

### References

No.	Legislation or publication
1	DECC Fuel Poverty Strategy 2001: <a href="http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/fuel_poverty/strategy/strategy.aspx">http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/fuel_poverty/strategy/strategy.aspx</a>
2	Ofgem - Monitoring suppliers' social programmes 2009-10: <a href="http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=264&amp;refer=Sustainability/SocAction/Suppliers/CSR">http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=264&amp;refer=Sustainability/SocAction/Suppliers/CSR</a>
3	DECC Annual Report on Fuel Poverty Statistics 2010: <a href="http://www.decc.gov.uk/assets/decc/Statistics/fuelpoverty/610-annual-fuel-poverty-statistics-2010.pdf">http://www.decc.gov.uk/assets/decc/Statistics/fuelpoverty/610-annual-fuel-poverty-statistics-2010.pdf</a>

### Evidence Base

#### Annual profile of monetised costs and benefits\* - (£m) constant prices

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
<b>Transition costs</b>	1.3									
<b>Annual recurring cost</b>		370	401	425	426					
<b>Total annual costs</b>	1.3	370	401	425	426					
<b>Transition benefits</b>										
<b>Annual recurring benefits</b>		518	587	614	616					
<b>Total annual benefits</b>		518	587	614	616					

\* For non-monetised benefits please see summary pages and main evidence base section

# Evidence Base (for summary sheets)

A number of changes and updates have been reflected in this final Impact Assessment (IA) relative to the consultation stage IA.<sup>1</sup> These are noted throughout the following evidence base, and those affecting the Net Present Value calculations are summarised in Annex 12.

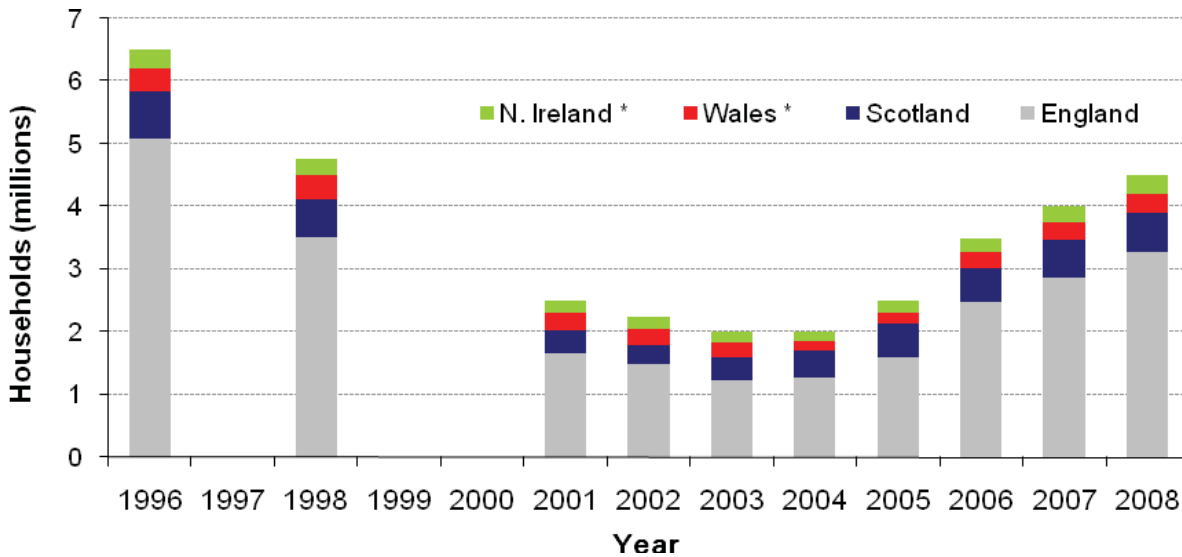
1. The Government took powers in the Energy Act 2010 to require energy suppliers to provide assistance to fuel poor and vulnerable households directly through energy bills. The Government has consulted proposals to use these powers, and is now implementing the Warm Home Discount scheme. This Impact Assessment assesses the costs and benefits of the option being implemented and of alternative delivery options considered during the development of the policy.

## BACKGROUND

### Fuel Poverty

2. A household is defined as fuel poor if it needs to spend more than 10% of its income to achieve an adequate standard of warmth<sup>2</sup> in the home. The Government has a statutory target to eradicate fuel poverty, as far as is reasonably practicable, in England by 2016 as detailed in the UK Fuel Poverty Strategy.<sup>3</sup> Scotland and Northern Ireland have targets to eliminate fuel poverty as far as is reasonably practicable by 2016 and the Welsh Assembly Government has a target to ensure that no household is living in fuel poverty by 2018.
3. Since 2004, the number of households living in fuel poverty in the UK increased from 2 million to 4.5 million in 2008.<sup>4</sup> Over the same period, the number of households living in fuel poverty in England has increased from an estimated 1.2 million to 3.3 million, and is projected to have risen to around 4 million households in 2010.

Chart 1 – Number of Fuel Poor Households in UK and England (1996 – 2008)



\* Estimated for 2007 & 2008

Source: DECC Fuel Poverty Statistics Annual Report 2010

4. There are three key drivers of fuel poverty; energy performance of the home, household income and domestic energy prices.

<sup>1</sup> Available at: <http://www.decc.gov.uk/assets/decc/Consultations/warm-home-discount/957-ia-warm-home-discount-scheme.pdf>

<sup>2</sup> Defined as being 21°C for the main living area and 18°C for other occupied rooms

<sup>3</sup> DTI (2001): 'The UK Fuel Poverty Strategy'; available at [http://www.decc.gov.uk/en/content/cms/what\\_we\\_do/consumers/fuel\\_poverty/strategy/strategy.aspx](http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/fuel_poverty/strategy/strategy.aspx)

<sup>4</sup> DECC Fuel Poverty Statistics Annual Report 2010, available from: [http://www.decc.gov.uk/en/content/cms/statistics/fuelpov\\_stats/fuelpov\\_stats.aspx](http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx)

- i. **Energy performance:** Poorer standards of thermal efficiency necessitate a larger energy consumption to heat the home to an adequate standard of thermal comfort. In 2008, around 22% of houses with a SAP<sup>5</sup> rating of 30 or below contained a fuel poor household, and over 70% of all fuel poor households reside in a home with a SAP rating of 50 or below.<sup>6</sup>
  - ii. **Household income:** Low income is also a significant indicator of fuel poverty. It is estimated that in 2008 just under 90% of fuel poor households are in the lowest three income deciles, and around 78% of the lowest income decile were fuel poor.
  - iii. **Energy Prices:** The increase in the number of fuel poor households since 2003 has been largely caused by rising energy prices over the period.
5. Although the drivers of fuel poverty are known, it is challenging to identify which households are fuel poor and should be targeted with assistance. To determine whether a household needs to spend more than 10% of its income on household energy costs requires information regarding household income and energy use, the price that the household is paying for energy, the energy performance of the home and the demographic characteristics of the household.
  6. Further, this information is required in real time as household circumstances are dynamic. Changes in circumstances mean that whether a household is fuel poor, and the extent to which that household experiences fuel poverty, will tend to vary over time.
  7. Given the large amount of data required in order to know whether a household is fuel poor, the Government tends to use proxies (for example, receipt of a particular benefit) to identify groups of households with a high propensity to fuel poverty in order to target assistance.

### **Fuel Poverty and Rising Energy Prices**

8. Since 1996, there has been an increase in both the average SAP rating of homes and in average household income. However, since 2003, rising energy prices have been a major contributor to increasing numbers of fuel poor households.
9. Between 2003 and 2009, domestic gas and electricity prices are estimated to have increased by 90% and 54% respectively in real terms,<sup>7</sup> rising significantly above the price trend for both over the preceding years (see Chart 2 below). This upward trend in energy prices resulted in an increase in the average household expenditure required to achieve an adequate level of thermal comfort of around 50% between 2003 and 2007. As depicted in Chart 3, the recent trend of rising energy prices has had a dramatic effect on the number of fuel poor households.

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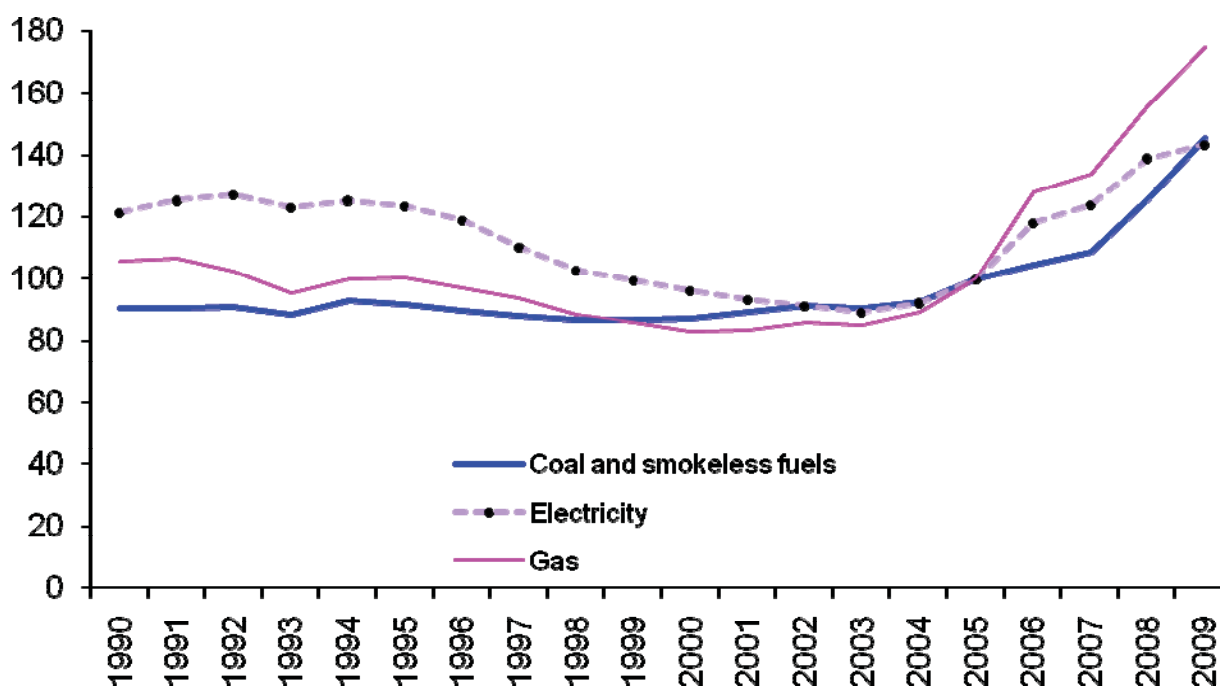
<sup>5</sup> Standard Assessment Procedure – A measure of the thermal efficiency of a residential building. A SAP of 100 is equivalent to zero energy costs.

<sup>6</sup> DECC Fuel Poverty 2008 – Detailed Tables, available from: [http://www.decc.gov.uk/en/content/cms/statistics/fuelpov\\_stats/fuelpov\\_stats.aspx](http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx)

<sup>7</sup> DECC Quarterly Energy Prices, December 2010, Table 2.1.2, available at: <http://www.decc.gov.uk/en/content/cms/statistics/publications/prices/prices.aspx>



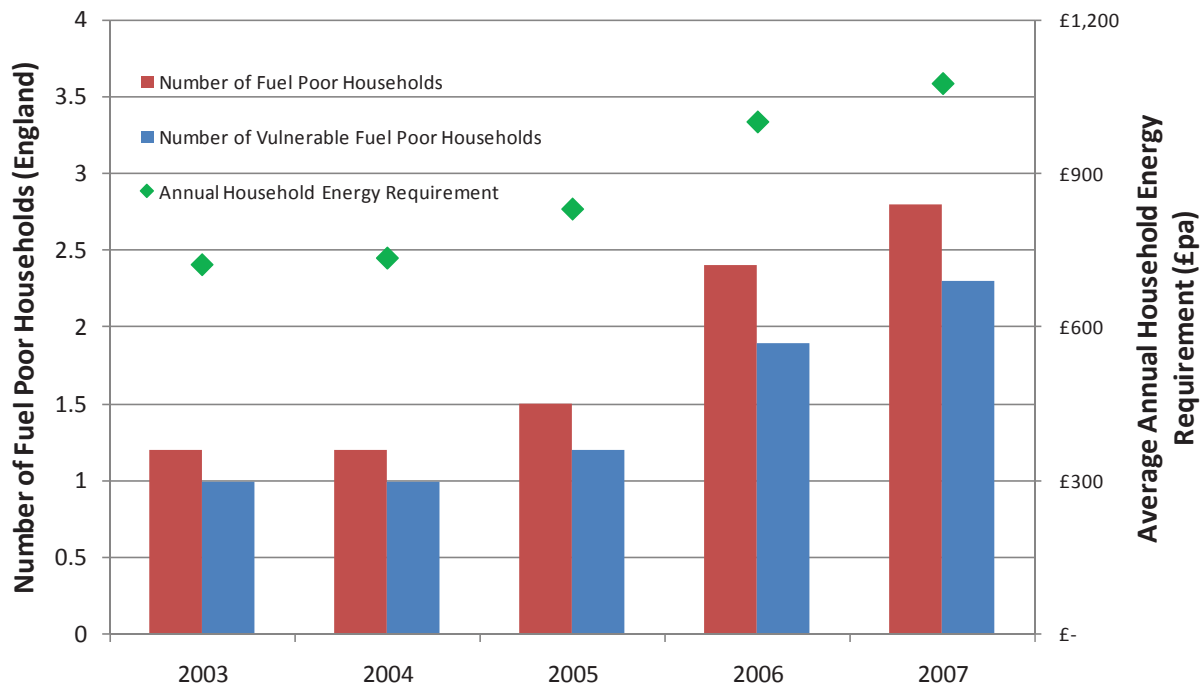
Chart 2 – Gas and electricity price index (2005 = 100)



Source: DECC Quarterly Energy Prices, December 2010, Table 2.1.2

Chart 3 – Number of fuel poor households against the rising cost of household energy requirement<sup>8</sup>

<sup>8</sup> Vulnerable households defined as those containing pensioners, children or long-term sick/disabled members.



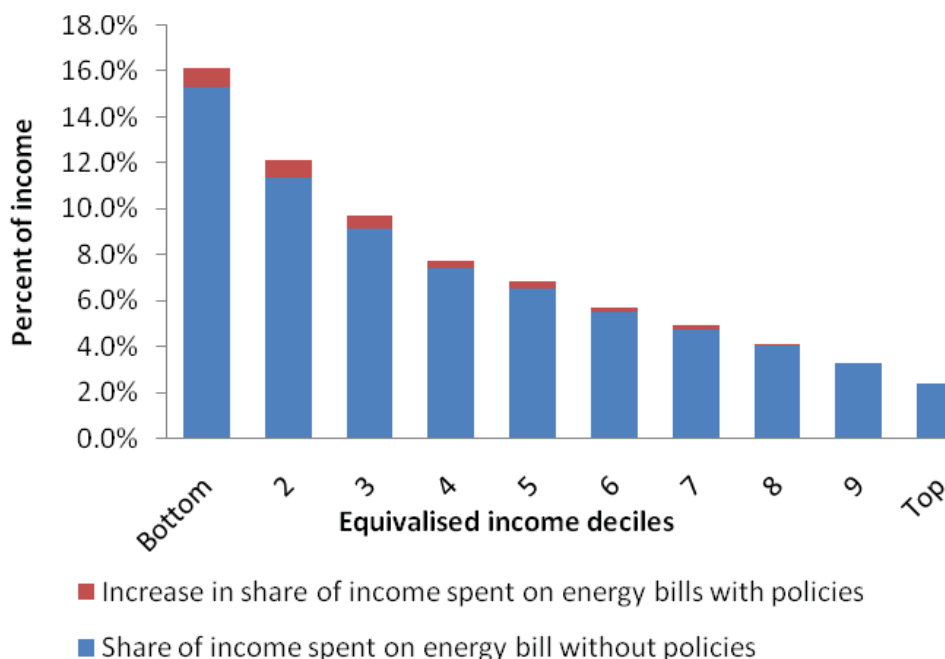
Source: DECC Fuel Poverty Statistics for fuel poverty numbers and BRE fuel poverty modelling for modelled energy bills

10. To 2020, energy prices are expected to continue their upward trend. In the recent Annual Energy Statement 2010<sup>9</sup>, it was reported that both the price of gas and electricity are expected to rise over the next 10 years as a consequence of expected increases in wholesale prices and transmission, distribution and metering costs, and also as a result of the Government's policies to drive the transition to a low-carbon economy.
11. The impact on average energy bills will be lower than the impact on prices, as the Government has a range of policies in place to improve energy efficiency, which will help households to reduce energy consumption. Analysis published alongside the DECC Annual Energy Statement 2010 showed that, on average, Government's climate change and energy policies are expected to add 1% to energy bills in 2020. However, this impact will not be uniform across all households. It is expected that a greater burden of these policies will fall on households with lower levels of equivalised income.<sup>10</sup>
12. Households in the lowest equivalised income decile are expected to experience an increase in household energy bills of 1% of household income by 2020 as a consequence of the Government's energy and climate change policies. In contrast, households in the highest equivalised income decile are anticipated to experience a decrease in energy bills, as comparatively wealthier households are assumed to be more likely to take up insulation and renewable measures due to the large up-front costs associated with investing in these measures (see Chart 4 below).

Chart 4 – Household energy expenditure as a proportion of household income in 2020

<sup>9</sup> DECC Estimated Impacts of Energy and Climate Change Policies on Energy Prices and Bills: [http://www.decc.gov.uk/en/content/cms/what\\_we\\_do/uk\\_supply/markets/impacts/impacts.aspx](http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/markets/impacts/impacts.aspx)

<sup>10</sup> The distributional analysis accompanying the Annual Energy Statement uses equivalised income deciles. Equivalised income reflects that households with more members are likely to have different consumption needs to a single person household. For example, a single person household will not have the same demands on their income as a 4 person household with the same income, and equivalised income reflects this. More information is available from the OECD: <http://www.oecd.org/dataoecd/61/52/35411111.pdf>



Source: DECC Annual Energy Statement Annex

### Fuel Poverty Policy

13. Helping a household to improve the thermal comfort and efficiency of their dwelling through the installation of heating and energy efficiency measures is usually the most cost-effective way of reducing the cost of maintaining an adequate level of warmth and removing a household from fuel poverty. However, upgrading the thermal efficiency of the housing stock is a gradual process. As such, the Government has in place a range of policies across all three drivers of fuel poverty:
  - On thermal efficiency: Warm Front delivers heating and energy efficiency measures alongside other services to eligible households<sup>11</sup>; energy suppliers must deliver 40% of the Carbon Emissions Reduction Target (CERT) obligation through assistance to a priority group of vulnerable households and 15% within the 'super-priority group'; and the Community Energy Saving Programme (CESP) is expected to deliver around £350m of energy efficiency and heating measures in areas of high deprivation from 2009. Going forward the Green Deal is a key element of the Government's policy to improve household energy efficiency;
  - On household income: In 2009/10, the Winter Fuel Payment provided pensioners with an additional £250 (£400 for households with a member over 80) and the Cold Weather Payment supplemented the income of a subset of targeted benefit recipients by £25 for every period of sufficiently cold temperatures<sup>12</sup>;
  - On energy prices: Suppliers agreed to deliver £375m of direct assistance to vulnerable households between 2008-11 under a voluntary agreement with the Government.

### *Voluntary Agreement*

14. Over the first two years of the voluntary agreement, Ofgem reported that the total level of support provided by energy suppliers to vulnerable customers was £310m (£157m in 2008/9 and £153m in 2009/10)<sup>13</sup>; £85m more than the aggregate expenditure agreed for those years. In 2009/10, around £113m of support was

<sup>11</sup> In 2008/09, Warm Front assisted around 234,000 households and on average, improved the thermal efficiency of an assisted household from SAP 38 to 62 (eaga (2009); 'Warm Front Scheme Annual Report – 2008 – 2009'.

<sup>12</sup> It is important to note that, due to the way that fuel poverty is defined, income measures tend to have a limited impact on whether a household is fuel poor (i.e., it would take a £1,000 increase in income to offset a £100 increase in energy costs).

<sup>13</sup> Ofgem – Monitoring Suppliers' Social Spend 104/09 and Monitoring Suppliers' Social Spend 2009-10, available at: <http://www.ofgem.gov.uk/Sustainability/SocAction/Suppliers/CSR/Pages/CSR.aspx>

provided in the form of social or discounted tariffs to over 1 million customer accounts. This agreement has been an important first step in demonstrating how suppliers can provide support directly to consumers.

15. The benefits offered by energy suppliers under the voluntary agreement have provided assistance to a large number of vulnerable households, improving the affordability of their household energy requirements. However, the voluntary agreement is set to expire at the end of March 2011, after which there is no guarantee that vulnerable and fuel poor households will be able to receive assistance through their energy bills.
16. Under the agreement, energy suppliers have discretion over which vulnerable households are eligible for support and how support is provided.<sup>14</sup> This has resulted in assistance being offered through a range of different initiatives, under wide ranging eligibility criteria.

## RATIONALE

### Support for vulnerable households through energy bills

17. Government took powers in the Energy Act 2010 to enable it to require energy suppliers to provide households identified as being fuel poor, or at risk of fuel poverty, with support towards their energy costs. The impact assessment that accompanied the Act<sup>15</sup> set out why it was preferable (for reasons relating both to the overall level of the support on offer and how that support is used) for the Government to regulate rather than attempt to negotiate an extension to the current voluntary agreement.
18. As such, the government considers that it is necessary to bring forward regulations under these powers to implement a support scheme as the voluntary agreement will come to an end in March 2011, after which there is no provision to ensure that any vulnerable households would be able to receive assistance through their energy bills.
19. The introduction of a mandated scheme will ensure that assistance is available to vulnerable households over a period where energy bills are expected to increase, with the impacts being felt particularly by low income households.
20. Further, putting in place regulations will allow the Government to give guidance over the most appropriate structure of support. This will significantly improve the targeting and cost-effectiveness of expenditure and the clarity for eligible households, whilst minimising any impact on competition and on non-eligible consumers.
21. Through the Spending Review 2010, Government set out the envelope for the amount of funding that energy suppliers would be expected to make available for support via energy bills over the four years from 2011/12. The obligation profile is detailed in the following table in nominal prices:

**Table 1 – Obligated expenditure profile set through Spending Review 2010 (nominal prices)**

Year	2011/12	2012/13	2013/14	2014/15
Required level of expenditure across participating suppliers	£250m	£275m	£300m	£310m

### Rationale for providing support for vulnerable households through energy bills

22. The rationale for providing support for vulnerable households through energy bills is founded in equity considerations and ensuring that measures are in place to make progress towards the Government's statutory fuel poverty target. The key equity objectives of this support are:
  - a. Fuel Poverty: Remove a significant number of households from fuel poverty and improve the thermal comfort and health of assisted households by providing direct support with energy bills, and;

<sup>14</sup> Ofgem has provided guidance determining what can be counted energy supplier social spend, available at: [http://www.ofgem.gov.uk/Sustainability/SocAction/Suppliers/CSR/Documents1/Monitoring\\_suppliers\\_10508.pdf](http://www.ofgem.gov.uk/Sustainability/SocAction/Suppliers/CSR/Documents1/Monitoring_suppliers_10508.pdf)  
<sup>15</sup> See: [http://www.decc.gov.uk/assets/decc/legislation/energybill/1\\_20100226093304\\_e\\_@@\\_energybillia.pdf](http://www.decc.gov.uk/assets/decc/legislation/energybill/1_20100226093304_e_@@_energybillia.pdf)

- b. Equity: Help to mitigate the burden of rising energy prices on low-income households, who will be worse affected than higher income households.
- 23. This type of support will directly reduce the household energy bill of assisted households and therefore, the proportion of income required to achieve an adequate standard of warmth. As many fuel poor households significantly under-heat their homes (see Table 9 below), support through bills would enable a significant number of poorer households to heat their homes to a more adequate level of thermal comfort, with consequent positive impacts on both the mental and physical health of household members.
  - 24. The most cost-effective method of removing a household from fuel poverty is usually to improve the thermal efficiency of the home. However, improving the thermal efficiency of the housing stock can only be achieved gradually, hence support through energy bills has an important role as it can provide assistance rapidly to a large number of households that are in, or are at risk of, fuel poverty.
  - 25. Further, many properties lived in by fuel poor households are hard-to-treat and require large investments in costly energy efficiency measures. In such cases, support through energy bills may be the most cost-effective method of providing assistance to vulnerable households.
  - 26. Energy prices are expected to continue to rise over the next decade driven by a combination of wholesale prices; transmission, distribution and metering costs; and the impact of the policies that have been put in place to meet the Government's emissions and renewable energy targets. Further, as energy costs represent a larger share of their overall income, a greater burden is likely to be placed on poorer households as a result of the Government's policies. As support through energy bills would be targeted at lower income households, it could partially offset the impact of rising energy bills on assisted households.

#### *Key Design Principles*

- 27. Alongside the above rationale for implementing support through energy bills, a number of key principles have been considered in the design of an appropriate support scheme:
  - a. Delivers a fair and clear benefit for consumers: consumers should have certainty on the absolute level of support that they will receive, allowing them to plan and budget for their energy costs;
  - b. Provides focused support for vulnerable households: support should be targeted at households vulnerable to fuel poverty;
  - c. Delivers good value for money: support should be a cost-effective tool for tackling fuel poverty, without undue administrative costs;
  - d. Is consistent with competitive energy markets: has a minimal impact on the incentives of consumers and suppliers to engage with the domestic energy market; and
  - e. Ensures a smooth transition from the current arrangements for consumers and suppliers.
- 28. There are significant problems associated with targeting and consequently delivering support to fuel poor households. Under the Warm Home Discount scheme, there is the potential for a significant proportion of the obligation will be targeted using a system of data-matching, which will provide support automatically to household energy accounts.
- 29. Using data-matching will reduce the burden on energy suppliers associated with identifying eligible households, as the matching process and associated costs will be borne by Government. Data matching will also improve the targeting and cost effectiveness of expenditure under the obligation. Further, matching data can only occur through the Warm Home Discount scheme as all identified households are guaranteed a benefit.
- 30. Support will be delivered through energy suppliers which, in turn, are likely to pass through the costs to their customer base. It is important therefore that the scheme is targeted as carefully as possible to maximise the cost-effectiveness of expenditure and to minimise the impact on the energy bills of non-eligible households.
- 31. Maintaining the competitiveness of the domestic energy market is also an important factor in the design of a policy of support through energy bills. Without appropriate policy design, support through energy bills could have a negative impact on competition in the domestic energy supply market, for example, if participating

energy suppliers face a disproportionate share of the obligation or if the scheme places a barrier to entry or expansion on smaller energy suppliers.

32. Further, the optimal support policy would provide support to vulnerable households without affecting the consumer's incentive to actively participate in the domestic energy supply market and switch to find the cheapest tariff.

## **POLICY OPTIONS**

### **Policy Options**

33. Three policy options are considered for analysis:

- Do Nothing;
- Policy Option 1: set a total level of mandated expenditure on support for vulnerable households through energy bills for energy suppliers. Suppliers would be obligated to provide only a total level of assistance with no further prescription;
- Policy Option 2: introduce the Warm Home Discount scheme. Suppliers would be obliged to provide a total level of assistance to vulnerable households with further direction around how support is provided.

### **Do nothing**

34. Ofgem reported that in 2009/10 energy suppliers delivered around £153m worth of benefits through various social initiatives under the voluntary agreement. Around £113m of this expenditure was directed through social and discounted tariffs, which varied between suppliers in terms of the level of benefit consumers received and which households were eligible for support.<sup>16</sup>
35. Other social initiatives were also funded through the voluntary agreement. For example, trust funds to write off debt owed to suppliers on household energy accounts, partnerships with third-party organisations to provide assistance and advice to households, energy efficiency initiatives and benefit entitlement checks (see Table 2.1 – 2.4 in Annex 2).
36. In 2010/11, energy suppliers have agreed to provide a total of £150m of support to vulnerable households.
37. When the voluntary agreement comes to an end in March 2011, and in the absence of new regulations, it is uncertain whether energy suppliers would continue to provide the same level of support that they made available in the final year of the agreement.
38. Suppliers currently fund the voluntary agreement through increasing the energy bills of non-eligible households. If support was reduced after the expiry of the voluntary agreement, this will likely mean a reduction in bills for non-recipients.
39. However, the reduction in the level of support available would immediately shift a large number of households into fuel poverty as households which had previously received support through social or discounted tariffs would experience an increase in their annual energy bills, as their tariffs return to standard levels.

### **Policy Option 1: Set a total level of mandated expenditure on support via energy bills**

40. The Government would bring forward legislation to mandate that energy suppliers must continue to spend a total amount on support to households vulnerable to fuel poverty, after the expiration of the voluntary agreement in April 2011. The total obligation will be set at £250m in 2011/12, rising to £310m in 2014/15.
41. Under this scenario, there would be certainty around the overall level of support that would be made available for the policy, but less certainty around how that funding would be used. In the absence of any

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<sup>16</sup> Ofgem, Monitoring Suppliers' Social Spend 2009-10, pp. 42-49, available at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Monitoring%20Suppliers%20Social%20Spend%202009-10.pdf&refer=Sustainability/SocAction/Suppliers/CSR>

prescription from Government on which types of households to target for support, this option is likely to resemble the current voluntary agreement, albeit with a legislative basis.<sup>17</sup> Suppliers would be obligated to spend an amount of the total funding envelope in proportion to their market share, and suppliers' expenditure would be audited annually.

42. It is uncertain what type or level of support would be delivered to households, or which households would be eligible under this option, as suppliers would have discretion over how expenditure is delivered (as is the case under the current voluntary agreement). Hence, it is likely that assistance would be delivered in a similar way to the agreement; i.e.; through a wide range of social initiatives with differing levels of benefit and eligibility criteria across different energy suppliers.
43. It can also be expected that energy suppliers would identify eligible households through similar methods as under the voluntary agreement<sup>18</sup>; where suppliers found and verified eligible households for support through a combination of approaches which included partnerships with charitable bodies, referrals from third party organisations and fuel poverty modelling.
44. This option would significantly increase the level of support available to vulnerable households relative to the 'Do Nothing' scenario and would represent an increase in the amount of expenditure from the last year of the voluntary agreement, resulting in a greater overall level of assistance being provided to a larger number of households.
45. Further, not prescribing how the benefits should be provided would allow energy suppliers the flexibility to develop innovative methods of supporting vulnerable households. It is assumed that suppliers would provide support in such a way that minimised their administrative burden associated with complying with the obligation.

#### **Policy Option 2: Introduce the Warm Home Discount scheme**

46. Following the expiry of the voluntary agreement in March 2011, Government would mandate energy suppliers to provide a total level of support to vulnerable households through domestic energy bills. Each supplier's individual obligation would be set in proportion to its share of the domestic energy market.
47. As under Policy Option 1, the total level of obligation would be set at £250m in 2011/12 rising to £310m in 2014/15.
48. In contrast to Policy Option 1, further prescription will be given regarding the support suppliers are obliged to provide. Under this option, Government will also:
  - direct energy suppliers to provide some of the support available to certain types of vulnerable households;
  - and
  - give guidance as to the size of the benefit and how it should be delivered.
49. The obligation will be broken down into four types of expenditure; Core Group, Broader Group, Legacy Spending and Industry Initiatives.
50. **Core Group:** Suppliers will be obliged to provide support to a group of households<sup>19</sup> according to a suitable set of eligibility criteria, currently whether a household is in receipt of a subset of Pension Credit (see eligibility section below for details of how these criteria were determined). Households in this group would be entitled to a standardised form of support.<sup>20</sup>

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<sup>17</sup> Other than a stipulation that benefit recipients should be fuel poor or vulnerable to fuel poverty.

<sup>18</sup> For details of how suppliers identified recipient households under the voluntary agreement see Ofgem, Monitoring Suppliers' Social Spend, available at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Monitoring%20Suppliers%20Social%20Spend%202009-10.pdf&refer=Sustainability/SocAction/Suppliers/CSR>

<sup>19</sup> In relation to the Core Group, the term "household" is used broadly. Core Group rebates will be paid to a claimant of the relevant passport benefit (or their partner if applicable), providing they are a customer of a participating energy supplier.

<sup>20</sup> Except under particular circumstances; where the eligible are not responsible for paying the households energy bill

51. The Core Group will be defined as a group of households with a high propensity to be fuel poor and at high risk of the detrimental health impacts from living in poor housing. Which particular group is most appropriate is considered in the eligibility section below.
52. Although it is unlikely that *all* households in this group will be fuel poor, setting eligibility in this way significantly increases the cost effectiveness of expenditure.
53. However, providing a particular eligible group with a right to support would imply an relatively higher administrative cost for some suppliers if they are obligated to provide support to a number of vulnerable households that is disproportionate to their market share. A reconciliation mechanism will be put in place to balance costs across suppliers such that they are proportional to market share. This will ensure that a supplier is not penalised through having a significant number of customers that are in the eligible group - for further details, see the Competition Specific Impact Test below.
54. The intention is for the Core group to be identified through a data matching mechanism which will combine Government benefit data with energy supplier account data. More information on data-matching can be found at Annex 3.
55. **Broader Group:** Due to the way in which eligibility will be defined in the Core group – a relatively narrow group of households that have a high propensity to fuel poverty, many vulnerable households outside of this group will not be eligible for support. Broader Group expenditure will give suppliers flexibility to provide support to other vulnerable households which lie outside the Core Group.
56. The Broader Group will be specified in terms of an amount of money that each energy supplier will be required to spend on households in, or vulnerable to, fuel poverty, that fall outside of the Core Group. It is anticipated that suppliers would utilise links with voluntary organisations and consumer groups as one of the ways to help identify those vulnerable consumers who would be eligible for this support (for example, through referrals).
57. Households will receive an identical level and type of benefit as the Core Group, however suppliers will be given more discretion over which households to target. This expenditure is therefore likely to be less cost effective in terms of removing households from fuel poverty than the Core Group, but will help ensure that a wider range of vulnerable households are assisted under the scheme.
58. **Legacy Spending:** This allocation allows suppliers to continue to offer support through social and discounted tariffs and rebates, which are currently providing assistance under the voluntary agreement. This ensures that suppliers have a provision through which they can continue to offer support to those households which are currently receiving assistance through the voluntary agreement over a transitional period.
59. Legacy Spending, which is in terms of value predominantly made up of social and discounted tariffs, is likely to be more difficult to monitor and provides less certainty to both consumers and energy suppliers than expenditure on the Broader Group due to the potential variation of the level of benefit received under the former. Therefore over time, expenditure on the Legacy group will decrease and be wholly offset by an increase in expenditure on the Broader and Core Group (see Annex 4 for a description of how it is expected that the Legacy Spend and Broader Group expenditure will evolve over time).
60. Providing assistance to this group will prevent many households from moving into fuel poverty in the short term, and after the expiry of the voluntary agreement would facilitate a smooth adjustment from the voluntary agreement to the mandatory scheme.
61. **Industry initiatives:** This allocation is intended to allow energy suppliers to spend a limited amount of their obligation in forms other than through household energy bills, as under the voluntary agreement (see Annex 2 for more details of the sorts of activities that suppliers funded through the voluntary agreement).
62. Suppliers will be able to count funding of a range of activities aimed at supporting vulnerable and fuel poor households. This includes improving the targeting of the available support, delivering energy efficiency measures, offering energy advice or certain types of debt relief.



63. Support provided by suppliers would be monitored and audited in each scheme year to ensure that energy suppliers are spending the correct amount under the obligation.

*Type of benefit provided*

64. There are a number of ways through which targeted support could be given to eligible households. Six different types of tariff support have been assessed for their suitability:
- i. **Fixed Rebate:** Households receive a lump sum discount on their energy bills (for example, a £100 annual reduction in their energy bill);
  - ii. **Social Tariff:** Under the voluntary agreement, Ofgem define a social tariff to be the lowest tariff available from that supplier in the particular region, on an enduring basis<sup>21</sup>;
  - iii. **Fixed Unit Price:** Eligible households are placed on a tariff which has a constant low price across all units of energy consumption
  - iv. **Bill Capping:** Household energy bills would not increase over a pre-set amount
  - v. **Percentage Discount:** Households have their energy bills reduced by a fixed proportion each year (for example, a 15% annual reduction in the energy bill)
  - vi. **Rebate linked to energy consumption (Proportional Rebate):** Households receive a rebate proportional to the amount of energy they consume (for example, a household consuming up to 100 units of energy could receive £50, while a household consuming between 100 and 200 units of energy would receive £100)
65. The different types of benefit are assessed in the following table against the following criteria:
- a. Does the option offer a clear and understandable benefit to the consumer? One advantage of mandating the provision of support is that Government can provide greater clarity to eligible households regarding the benefit that they are receiving. Clarity is important such that households can confidently improve the thermal comfort of the home with certainty over how much assistance they will receive.
  - b. Does the option maintain the incentive to conserve energy? It is important that the benefit provided should have a minimal impact on the incentive for energy consumers to make prudent use of energy and/or the incentive to install energy efficiency measures.
  - c. Does the option minimise the negative impacts on competition? It is important to ensure that the policy maintains the incentives for consumers to switch suppliers to look for the best tariff available and the incentive for suppliers to continue to compete for customers across the entire market.
  - d. Does the option give certainty/predictability of spend for suppliers and government? Maximising the ability to which energy suppliers can plan and anticipate their expenditure on support would increase the probability that the final level of expenditure matches the obligation.
  - e. Does the option help to simplify the process of monitoring, auditing and reconciling the policy?: Increasing the complexities associated with administering the scheme would consequently raise the administrative costs associated with monitoring, auditing and reconciling a support via energy bills scheme.

**Table 2 – Assessment of types of support**

Type of Tariff	Clarity of benefit?	Incentive to conserve energy?	Minimise impact on competition ?	Predictability of spend?	Simple to administer?
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<sup>21</sup> Ofgem, Monitoring Suppliers' Social Spend, available at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Monitoring%20Suppliers%20Social%20Spend%202009-10.pdf&refer=Sustainability/SocAction/Suppliers/CSR>

<b>Fixed Rebate</b>	✓✓	✓✓	✓✓	✓✓	✓✓
<b>Social Tariff</b>	-	✓	✓	✓	-
<b>Fixed Unit Price</b>	-	-	-	✓	-
<b>Bill Capping</b>	✓	-	-	-	✓
<b>Percentage Discount</b>	✓	✓	✓	✓	✓
<b>Proportional Rebate</b>	✓	✓	✓	✓	✓

66. The benefit received by a household on a social or fixed unit tariff would depend on their consumption and the relative tariff<sup>22</sup> for their particular payment method. Hence, it would be relatively difficult, compared to other types of benefit, for households to determine what benefit they have received. This would be less of an issue under a percentage discount or proportional rebate scheme, as the relative level of benefit would be made clear up front, but the actual benefit would be unknown until after the energy had been consumed. However, a fixed level of rebate would provide complete certainty to the household as the level of rebate per year per household would be fixed.
67. A fixed rebate is likely to have the least impact on competition in the domestic energy supply market as eligible consumers continue to purchase energy according to the existing underlying tariff structure. Consumers therefore retain the incentive to search for a better deal in the market. Fixed unit price tariffs and bill capping both act to effectively remove recipient households from the competitive market and suppliers may have little or no incentive to compete to attempt to attract these households. Percentage discount and proportionate rebates would be based on existing underlying tariffs, and therefore allow comparisons across suppliers, but comparing would be complicated by the level of benefit being determined by the amount of energy consumed.
68. Benefits that reduce the unit price of energy are likely to have a larger negative impact on the incentive to conserve energy and to install energy efficiency measures compared with a fixed rebate, where the unit price of energy is unchanged.
69. A fixed rebate would also imply lower monitoring costs as an auditor would only have to determine the number of customer accounts supported. Whereas, for other tariff types, further information, for example, the average level of consumption or the relative tariff level, would be required to determine the level of benefit provided, making it more difficult and costly to audit and reconcile. Fixed rebates would also offer the lowest risk to suppliers in terms of planning obligated expenditure.
70. Hence, a fixed rebate applied to household energy bills is the most appropriate form of support through energy bills, and support to the Core and Broader Groups will be in this form. A more detailed analysis of the different options can be found in the Annex 5.

*Eligibility options for the Core Group*

71. Core Group support will give an entitlement to the eligible group of households to receive assistance through the scheme. Due to the inherent problems associated with targeting support directly at fuel poor households, it is necessary to use proxy eligibility criteria with which to target support. This section outlines why Government has chosen subsets of Pension Credit as the most appropriate proxy.
72. Fuel poverty is highly correlated with low income, and as such, means-tested benefits are a particularly useful proxy criteria through which assistance can be targeted towards fuel poor households. Further, using a 'passport' means-tested benefit<sup>23</sup> to target Core Group support also facilitates the use of a data-matching mechanism to effectively identify and provide benefits automatically to eligible households.<sup>24</sup>

<sup>22</sup> The tariff against which the social or fixed tariff is compared to in order to calculate the saving.

<sup>23</sup> 'Passport benefit' refers to an existing benefit that could be used to confer eligibility for a price support scheme. For example, if the intention was to target support at pensioners on low incomes, then a suitable Passport benefit might be Pension Credit.

<sup>24</sup> Pensions Act 2008 Section 142 gives the Secretary of State power to make regulations regarding disclosing social security information on Pension Credit recipients to energy suppliers and vice versa. It prescribes that the Regulations must specify the purpose for which that information that is supplied, which must be in connection with enabling the provision of assistance to persons in receipt of State Pension Credit. Although only powers to match Pension Credit data currently exist, powers to match data of other means-tested benefits could be sought in future.

73. However, as no means-tested benefit overlaps completely with fuel poverty, some non-fuel poor households would be included in the Core Group for support. Further, using means-tested benefits would target support at a group of households with particular demographic characteristics which define eligibility for the 'passport' benefit.
74. To maximise the cost-effectiveness of support and focus assistance on households which would benefit the most from receiving support, Core Group assistance should be targeted at a group of households; with a high propensity to be fuel poor; that are more likely to be persistently fuel poor; and are at high risk of the detrimental health impacts of residing in cold homes. Three groups of households are identified in the UK Fuel Poverty Strategy as being particularly vulnerable to the detrimental impacts of living in cold homes: households containing a pensioner; a child; or a member who is long-term sick or disabled.
75. The provision of an entitlement to support for a particular group should also consider the impact of support on the incentives for that group to actively engage in the labour market.
76. The consideration of the three vulnerable groups with respect to the criteria set out above is contained in the following table (a more detailed discussion of the different groups can be found in Annex 6).

**Table 3 – Assessment of eligible groups against criteria**

Low income household type	Pensioner household	Household with child	Household with long-term sick or disabled member
Can an appropriate target proxy be identified?	✓	✓	✓ NB: Benefits currently in transition
Health risk due to living in fuel poverty?	High	High	High
Propensity to be Fuel Poor?	High	High	Medium - High
Stability of proxy group?	High	Medium	Medium
Impact on work incentives?	Low	Medium	Medium

#### *Suitable Proxy*

77. Suitable means-tested benefits can be identified to target both low income households with either a pensioner (Pension Credit) or child (Child Tax Credit), with flexibility within each benefit to limit the size of the group to an affordable size and to maximise the propensity of the group to be fuel poor. Suitable benefit proxies to target low income households with a long-term sick or disabled member do exist, but they are currently in transition.<sup>25</sup> This could result in an increased level of uncertainty around the size of any Core Group obligation in future.

#### *Health Risk*

78. The health of vulnerable household members in each group is likely to be at high risk due to living in cold homes. However, the specific health risk differs between the different vulnerable groups. Pensioner households are at an increased risk of death, whereas young children are more likely to develop respiratory illnesses and long-term sick people could have their recovery time lengthened as a consequence of living in cold housing.

#### *Propensity to Fuel Poverty*

<sup>25</sup> From October 2008, those previously eligible for Income Support with a disability element are subsequently eligible for Employment and Support Allowance, alongside those previously receiving Incapacity Benefit.

79. Both low income households with a pensioner or a child are likely to have a high propensity to be fuel poor. Low income households with a long-term sick or disabled member are also likely to have a high propensity to be fuel poor, but a relatively lower propensity relative to the other two vulnerable groups. This is because households with a long-term sick or disabled members are more likely to claim a number of other benefits related to their individual support need which increase the average income of the group.

*Stability of Income*

80. Low income pensioners are a very stable group of households in terms of the level of household income, relative to both low income households with either a child or a long-term sick or disabled member. As the pensioner group are removed from the active labour market, they are less likely to experience changes in income as a result. As this group is more stable, this would ensure support is provided to households which are more likely to be persistently fuel poor and experience the detrimental impacts of residing in poor living conditions over a longer period of time.

*Incentives to work*

81. Further, as the majority of pensioners are not active in the labour market, providing support through bills to this group would have the least impact on the incentives for the supported group to find work. Low-income households with either a child or a long-term sick or disabled member are more likely to contain active members of the labour market.
82. Targeting Core Group support at low income pensioner households through Pension Credit receipt is therefore considered to be the most suitable option. This group has the highest risk of death as a consequence of living in cold housing and is also more likely to be persistently in fuel poverty. Further, providing support to this group will also have the smallest impact on the incentives of households to actively participate in the labour market. This group is also preferable as older households are less likely to engage in switching behaviour to find the best energy tariff available.<sup>26</sup>

*Fuel poverty modelling to identify suitable core group*

83. Targeting households in receipt of Pension Credit offers a degree of flexibility in selecting an appropriate Core Group to target for support. Recipients can be identified by the type of Pension Credit received<sup>27</sup> or by the age of the household reference person. As such, a number of different eligible groups within the Pension Credit group can be identified. Table 4 summarises the different types of Pension Credit – the Guarantee Credit, which provides a guaranteed minimum income for low income households; and the Savings Credit, which provides additional income support to low income households that have made additional provisions for their retirement.

**Table 4 – Summary of types of Pension Credit<sup>28</sup>**

Type of Pension Credit	Age Eligibility Threshold	Income Eligibility Threshold	Other Eligibility Criteria	Benefit Given
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<sup>26</sup> An Ipsos Mori study for Ofgem found that only 15% of households with a member over 65 had switched electricity supplier in the last year (to June 2008), and only 17% had switched gas supplier. The switching rates amongst this group were significantly below those of other age groups and the average of 23% and 24% for electricity and gas respectively. The report is available here: [http://www.ofgem.gov.uk/Sustainability/Cp/CF/Documents1/Customer\\_Engagement\\_Survey\\_FINAL1.pdf](http://www.ofgem.gov.uk/Sustainability/Cp/CF/Documents1/Customer_Engagement_Survey_FINAL1.pdf)

<sup>27</sup> Either Guarantee Credit only, both Guarantee and Savings Credit or Savings Credit only

<sup>28</sup> Correct as of 26/01/2011. Up to date information on Pension Credit is available from: [http://www.direct.gov.uk/en/Pensionsandretirementplanning/PensionCredit/DG\\_10018692](http://www.direct.gov.uk/en/Pensionsandretirementplanning/PensionCredit/DG_10018692)

Guarantee Credit	Qualifying age is linked to women's state pension age (increasing from 60 – 65)	Weekly income must be below: <ul style="list-style-type: none"> <li>£132.60 if single;</li> <li>£202.40 if have a partner.</li> </ul>	Can still claim if partner is under qualifying age, provided claimant is above the threshold.	Weekly income is topped up to*: <ul style="list-style-type: none"> <li>£132.60 if single;</li> <li>£202.40 if have a partner.</li> </ul>
Savings Credit	65 years old or over	May <i>not</i> be eligible if weekly income <i>exceeds</i> : <ul style="list-style-type: none"> <li>£184 if single;</li> <li>£270 if have a partner.</li> </ul>	Must have made some provision for retirement such as savings or a second pension.	Can be worth up to: <ul style="list-style-type: none"> <li>£20.52 if single;</li> <li>£27.09 if have a partner; a week.</li> </ul>

\* This could be more for those with a severe disability, caring responsibilities or certain housing costs.

84. A number of different Core Group scenario options have been identified to model the impact on fuel poverty. This modelling helps to inform the potential trade-offs between targeting different types of Pension Credit, and also between applying different age thresholds to the eligibility criteria.
85. It is important to apply some caution when interpreting these figures. The binary nature of the fuel poverty definition means that some households will remain in fuel poverty after they receive the benefit. As such, some scenarios may appear to deliver better value for money than others because they happen to target a group of households that are only marginally fuel poor (so the application of the benefit from support through bills will remove many of them from fuel poverty). While the cost-effectiveness metric is a useful guide for terms of setting the Core group eligibility, it should not be the only consideration.
86. The cost effectiveness of Core Group expenditure under the different modelled scenarios are shown in Table 5 below, where the cost-effectiveness is represented as the expenditure per household removed from fuel poverty. This scenario is based on a rebate level of £130 per annum, which is the average rebate level that will be delivered to eligible households over the four years of the scheme, and approximately the value of the average benefit delivered under the first year of the voluntary agreement. 'Guarantee Credit Only' refers to those households that receive the Pension Credit Guarantee Credit but do *not* receive Savings Credit; 'Guarantee Credit and Savings Credit' refers to households who receive both Guarantee Credit and Savings Credit. For more detail on the fuel poverty modelling method and results, see Annex 7.

**Table 5 – Amount of expenditure per household removed from fuel poverty (nominal prices)**

Pension credit eligibility criteria	Total expenditure to support group – each household receiving a benefit of £130 (£m)	Households removed from fuel poverty	Expenditure per household removed from fuel poverty (£/household)
<b>60+ Guarantee Credit only</b>	£105m	38,000	£2,800
<b>70+ Guarantee Credit only</b>	£45m	14,000	£3,200
<b>70+ Guarantee Credit only and Guarantee Credit <u>and</u> Savings Credit</b>	£119m	45,000	£2,600
<b>80+ Guarantee Credit only and Guarantee Credit <u>and</u> Savings Credit</b>	£57m	21,000	£2,700

87. The results suggest that in terms of removing households from fuel poverty it is less effective to target Guarantee Credit recipients only relative to the wider group of those receiving Guarantee Credit and Savings Credit. This is because households receiving Guarantee Credit only will tend to have lower incomes, and therefore fuel expenditures may make up a higher proportion of their income. Hence, as fuel poverty is closely correlated with low income, the Guarantee Credit group is likely to have a higher propensity to be fuel poor and as such, focusing on recipient households of Guarantee Credit first will increase the amount of resources targeted towards fuel poor households.
88. The results with respect to age are inconclusive. However, at least intuitively, we would expect that older pensioner households would be more vulnerable to suffer detriment from living in under-heated homes.<sup>29</sup>
89. The results in table 5 will be sensitive to the assumed level of the benefit that is paid to households. Within a given funding envelope there is a choice to be made between higher benefits to fewer households versus smaller benefits to a greater number of households. The detailed results in Annex 7 show how the results vary for different levels of benefit. It is not possible to draw strong conclusions from these results about the relative attractiveness of the two Policy Options.

### Eligibility for the Core Group

Year	Eligibility
2011/12	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit).
2012/13	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). 80 and over* and in receipt of Pension Credit Guarantee Credit and Savings Credit.
2013/14	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). 75 and over* and in receipt of Pension Credit Guarantee Credit and Savings Credit.
2014/15	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). All in receipt of Pension Credit Guarantee Credit and Savings Credit.

\* Age thresholds apply to either or both the Pension Credit claimant or their partner.

90. All households receiving Guarantee Credit only will be eligible for Core Group support in the first year. As the resources available to support households through the Core Group increases in subsequent years, those receiving both Guarantee and Savings Credit will become eligible, using an appropriate age threshold for this group in the second and third years to restrict this group to an affordable size, and balance the targeting of vulnerable groups through Core and Broader Group support. In the final year of the scheme all of those in receipt of Guarantee Credit only and all those in receipt of Guarantee Credit and Savings Credit will be eligible for Core Group Support.
91. The Core Group includes only Guarantee Credit recipients in the first year and expands to include a proportion of the Guarantee and Savings Credit recipients over time, including the oldest in this group first. This progression aims to build up eligibility primarily by household income, and then reflecting the increased risk of detrimental health impacts and winter deaths associated with living in cold housing as age increases.
92. Under the Warm Home Discount scheme Core Group households will receive an annual fixed rebate of £120 through their electricity bill in 2011/12, rising to £130 in 2012/13, £135 in 2013/14, and £140 in 2013/14 (in nominal prices).<sup>30</sup> The increase in benefit in later years of the scheme is in part motivated by the current

<sup>29</sup> The Office for National Statistics Excess Winter Deaths Mortality Dataset shows that the rate of excess winter deaths increases with age. Figures for 2009/10 show the average number of excess winter deaths in England and Wales for 0-65 age cohort was 2,400; for the 65-74 age cohort the number is 2,500; for the 74-84 cohort the number is 7,600; and for 85+ the number rises to 13,000. The dataset is available from <http://www.statistics.gov.uk/cci/nugget.asp?id=574>

<sup>30</sup> The level of benefit in 2011/12 detailed here is lower than the £130 proposed in the consultation stage impact assessment. This adjustment has been made to reflect recently updated data on the forecasted number of recipients of Pension Credit over the period of the scheme, which significantly increases the estimated size of the Core Group, the most cost-effective component of the scheme, in year one only. This is a result of a Department for Work and Pensions policy change relating to those eligible for Savings Credit. The level of benefit has been adjusted to

upward trend in energy prices, and also intends to help to offset the increase in the energy bills of vulnerable households as a consequence of the Government's energy and climate change policies.

#### *Distribution of expenditure*

93. Taking into account the proposed Core Group eligibility, the approximate distribution of the total obligation across the four groups of expenditure is outlined in Table 6.1 in nominal prices.
94. To reflect that current activities under the voluntary agreement vary significantly by energy supplier, the decision has been taken to introduce additional flexibility between the Legacy Spend and the Industry Initiative parts of the scheme. Rather than cap each component individually, a maximum cap for the combined spend of the two sections of the model will be introduced, as set out in Table 6.1. Within that cap there will be two further sub-caps: one for Legacy Spend, and one for Industry Initiatives. The combined total of these two sub-caps will be greater than the combined cap allowed for the sections. Therefore suppliers will not be able to spend to the maximum sub-cap on both Legacy Spend and Industry Initiatives. Instead, suppliers will have the flexibility to choose the exact split between the two, keeping within their overall total allowance. As suppliers will be able to choose a split which more closely resembles what they are doing currently, we expect this to lead to smoother transition from the voluntary agreement to the mandated scheme.
95. It is uncertain to what extent suppliers will use this flexibility, therefore for the purposes of the cost-benefit analysis that follows we assume that overall suppliers allocate expenditure in a balanced way between Legacy Spend and Industry Initiatives below the maximum sub-caps for each component, as outlined in Table 6.2.

**Table 6.1 – Split of Warm Home Discount obligation between expenditure groups (nominal prices)**

<b>Expenditure Type</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Core Group	£97m	£143m	£159m	£190m
Broader Group	£3m	£47m	£88m	£90m
Total Legacy Spending and Industry Initiatives Cap	£150m	£85m	£53m	£30m
<i>Legacy Spending Cap</i>	<i>£140m</i>	<i>£70m</i>	<i>£35m</i>	<i>£0m</i>
<i>Industry Initiatives Cap</i>	<i>£30m</i>	<i>£30m</i>	<i>£30m</i>	<i>£30m</i>
<b>Total</b>	<b>£250m</b>	<b>£275m</b>	<b>£300m</b>	<b>£310m</b>

**Table 6.2 – Assumed Split of Warm Home Discount obligation between expenditure groups in Cost-Benefit Analysis (nominal prices)**

<b>Expenditure Type</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Core Group	£97m	£143m	£159m	£190m

accommodate a larger Core Group within the existing funding envelope, and strike a balance between level of assistance and number of households assisted.

Broader Group	£3m	£47m	£88m	£90m
Legacy Spending	£130m	£65m	£33m	£0m
Industry Initiatives	£20m	£20m	£20m	£30m
<b>Total</b>	<b>£250m</b>	<b>£275m</b>	<b>£300m</b>	<b>£310m</b>

96. This expenditure profile ensures that sufficient resources are available to provide support to particularly fuel poor households through the Core Group, whilst maintaining transitional support to households through the Legacy Spending and a growing level of support available to other vulnerable households through the Broader Group (i.e., those not eligible for support in the Core Group).

## COST-BENEFIT ANALYSIS

97. The following section assesses the costs and benefits of Policy Options 1 and 2, using the Do Nothing option as the counterfactual.

### Monetised Benefit: Equity Weighted Value of Transfers

98. The support to eligible households and estimated costs passed through to energy bills for non-eligible households are adjusted to reflect that support on bills will be worth more to some households than others. This adjustment is called 'equity weighting' (see Annex 8 for more details).

99. In line with the methodology in the *Green Book*, the equity weighting used in this impact assessment is applied on the basis of income, whereby support given to households in lower income groups is judged to be more valuable to society than assistance given to households in higher income groups.

100. It should be acknowledged, however, that while reflecting equity in terms of income is appropriate for support through energy bills as fuel poverty is highly correlated with low income, it is one of a number of important equity factors to consider. However, at present other such factors cannot be included in a monetised assessment.

101. Energy suppliers are likely to pass on the costs of the obligation through to their customer base.<sup>31</sup> In this context, support would represent a transfer through domestic energy bills from all energy consumers to households that receive a benefit through the scheme.

102. As support through energy bills is likely to be targeted at a subset of lower income households, the transfers under both Policy Options would have a positive equity value to society. This distributional impact can be measured using the equity weights methodology set out in the *Green Book*.<sup>32</sup>

103. The equity weighted benefit of the different Policy Options is included in the following table. Further information on the theory and method of using equity weights can be found in Annex 8.

**Table 7 – Equity Weighted Value of Support through Energy Bills (Present Value, 2009 prices)**

Policy Option	Year	2011/12	2012/13	2013/14	2014/15	Total
1	Equity weighted transfer to recipient households (£m)	+398	+409	+415	+402	+1,623
	Equity weighted transfer from non-recipient households (£m)	-286	-293	-297	-285	-1,160

<sup>31</sup> It is assumed that energy suppliers pass through the costs of the policy as a fixed lump sum per domestic electricity consumer. However, in practice, energy suppliers have a wide number of options through which they may choose to re-coup the costs of the obligation, for example, placing some of the charge on non-domestic energy bills or on other energy bills, or placing a fixed fee per unit of energy supplied rather than per account represent a few of the alternative ways this could be done

<sup>32</sup> HM Treasury, The Green Book, available from: [http://www.hm-treasury.gov.uk/data\\_greenbook\\_index.htm](http://www.hm-treasury.gov.uk/data_greenbook_index.htm)



	<b>Net equity value (£m)</b>	<b>+112</b>	<b>+116</b>	<b>+118</b>	<b>+117</b>	<b>+463</b>
<b>2</b>	Equity weighted transfer to recipient households (£m)	+501	+548	+553	+537	+2,139
	Equity weighted transfer from non-recipient households (£m)	-282	-292	-297	-292	1,163
	<b>Net equity value (£m)</b>	<b>+218</b>	<b>+256</b>	<b>+257</b>	<b>+244</b>	<b>+976</b>

104. The support provided under both options has a significantly positive equity weighted value to society. However, support under Policy Option 2 has a higher equity weighted value than Policy Option 1. This is primarily because Policy Option 2 is better targeted at low-income households. Under Policy Option 2, Government is able to direct suppliers to spend a significant proportion of the obligation towards households in the lowest income deciles, who place a greater value on an additional unit of income, than under Policy Option 1.

### Non-Monetised Benefits: Fuel Poverty Impact

105. One of the key benefits of support through bills will be the impact of assistance on the total number of fuel poor households. The estimated net impact on fuel poverty and the average energy bill of non-eligible households for each option are included in Table 8.

106. The impact of the measure on the number of households in fuel poverty is relevant in terms of understanding the contribution of the policy in terms of making progress towards the Government's statutory fuel poverty targets. However, the binary nature of the fuel poverty target does not capture the impact of the policy on households who have received a payment but remain fuel poor. Consequently, we have examined an additional measure, the impact on the number of households in extreme fuel poverty (defined for the purpose of this IA as households who would need to spend at least 20% of households income to maintain an adequate level of heating).

107. A further breakdown of these impacts alongside detail regarding the methodology for modelling the impacts on fuel poverty and energy bills can be found in Annex 9.

**Table 8 – Fuel Poverty and Average Energy Bill Impact (nominal prices)**

<b>Policy Option</b>	<b>Impact</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
<b>1</b>	Net Impact on Fuel Poverty	-41,000	-46,000	-55,000	-58,000
	Impact on number in extreme fuel poverty <sup>33</sup>	-21,000	-28,000	-18,000	-19,000
	Impact on Annual Energy Bills of Non-Eligible Households	£10	£11	£12	£12
<b>2</b>	Net Impact on Fuel Poverty	-88,000	-87,000	-102,000	-98,000
	Impact on number in extreme fuel poverty	-48,000	-55,000	-47,000	-49,000

<sup>33</sup> Defined as where the cost of household energy requirement takes up more than 20% of household income.

	Impact on Annual Energy Bills of Non-Eligible Households	£10	£11	£12	£12
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108. It is estimated that Policy Option 2 will remove a greater number of households from fuel poverty and from extreme fuel poverty in each year relative to Policy Option 1.<sup>34</sup> This indicates that Policy Option 2 will both a) be more effective at removing households from fuel poverty and extreme fuel poverty than Policy Option 1, and b) reduce the extent of fuel poverty on average for households who remain fuel poor.
109. This is because Policy Option 2 is better targeted at households who are fuel poor relative to Policy Option 1. As a result, a greater amount of the total resource is directed towards fuel poor households. This increases the cost effectiveness of the expenditure, as more households are removed from fuel poverty and from extreme fuel poverty per pound of support spent.
110. There is no method through which the benefit of removing households from fuel poverty can be monetised and so this benefit is reported as a non-monetised benefit in the summary tables of this Impact Assessment.
111. Under both options, energy suppliers are obligated to spend the same amount in each year and hence the anticipated impact on the average annual energy bill of non-eligible households is expected to be identical under each Policy Option.

#### **Non-Monetised Benefit: Health Impact**

112. The provision of support under both Policy Options would reduce the cost to the householder of heating the home to an adequate standard of thermal comfort. Hence, support through energy bills is expected to have a positive impact on both the physical and mental health of household members through an improvement in conditions within the home and an improvement in the affordability of the household energy requirement.
113. The anticipated health benefits of support through energy bills are not monetised in this Impact Assessment as there is no robust methodology with which to quantify these impacts. However, a qualitative discussion of the likely health impacts is included in the Health Specific Impact Test below.

#### **Monetised Costs: Impact on energy consumption, greenhouse gas emissions and air quality**

114. There is evidence to suggest that many low-income households significantly under-heat their homes, consuming an amount of energy below that required to achieve an adequate level of thermal comfort (see Table 9 below). Support would be targeted under both Policy Options at a subset of vulnerable households with the aim that those receiving assistance are able to increase the level of thermal comfort within the home. Under Policy Option 1, we have assumed that the support delivered would take a similar form to that currently being delivered under the voluntary agreement (i.e., mainly social and discounted tariffs which impact directly on the unit price of energy), whereas Policy Option 2 would mainly deliver rebates (which would be a lump-sum payment and would not affect the unit price of energy).

**Table 9 – A comparison of actual and notional household energy use (2007 prices)**

<sup>34</sup> The estimated number of households removed from fuel poverty in this impact assessment are slightly lower under both Policy Option 1 and Policy Option 2 than in the consultation stage impact assessment. For Policy Option 1 this is due to a revision to assumed average level of benefit delivered to each household (now £84, rather than £112 – see Annexes 9 and 12 for details). For Policy Option 2, this is due mainly to the use of updated forecasts to determine the size of the Core Group, and the assumed income distribution of households supported under the Broader Group (see Annexes 9 and 12 for details).

Income Decile	Average Actual Annual Energy Expenditure <sup>35</sup> (£)	Average Required Annual Energy Expenditure <sup>36</sup> (£)	Actual Expenditure as a proportion of modelled requirement
1	£671	£1,124	60%
2	£764	£1,109	69%
3	£811	£1,173	69%

115. The total change in energy demand as a result of support through energy bills will be determined by the level of the payment that households receive and the energy demand response across different households. Energy demand responses will be determined by different elasticities of demand for energy. For example, support under Policy Option 1, such as social tariffs, impacts the price of energy, and therefore price elasticities of demand should ideally be used to estimate the demand response for these households.
116. Fixed rebates under Policy Option 2, however, are akin to lump sum increases in income for recipient households, therefore income elasticities of demand should be used to estimate the energy demand response for these households. Energy suppliers can recoup the costs of the obligation through increasing household energy bills in a number of ways – including increasing the unit price of energy, whether for all energy prices or levying a lump sum on all energy bills. Again price elasticities would be appropriate if costs are passed on through unit prices, and income elasticities if they are passed on in lump sum form.
117. For simplicity we have applied income elasticities to assess the possible energy demand response across both Policy Options. As certain types of support focus unit prices (e.g. social tariffs), and they are likely to be more prominent in Policy Option 1, and price elasticities are usually higher for prices than for income, we expect that we under-estimate the energy demand responses under Policy Option 1.
118. The income elasticity of demand for energy is expected to be positive. Hence, recipient households are expected to increase their energy demand in response to a lump-sum reduction in their energy bill, whereas non-eligible households would be expected to reduce their energy demand in response to an increase in their energy bill. The net impact on the total energy demand will depend on the balance of the demand changes between the two groups.
119. The income elasticities assumed for the non-eligible group are informed by a recent study into the determinants of energy expenditures in Great Britain.<sup>37</sup> The study provides income elasticity estimates for different income groups, which allows us to assign different elasticities to households in each income decile considered in this impact assessment. Despite this variation across income deciles, energy demand for this group is assumed to be relatively income inelastic, for example the highest elasticity assigned to an income decile group for gas is 0.168. This is likely to reflect the fact that relatively better off non-eligible households are more likely to be consuming closer to their desired level of heat, and an increase in their bill will result in a relatively small decrease in energy consumption. Further, the increase in household energy bills for non-eligible households are expected to be marginal relative to the size of their overall energy bill.
120. The income elasticities for eligible households in response to support are assumed to be relatively more elastic (e.g. the income elasticity of gas demand is assumed to be 0.5 for this group of households). This assumption is based on the fact that support is provided to households directly through their energy bills to facilitate an increase in energy consumption by recipients, and eligible households will be informed as such. Further, the relatively poorer recipient households are more likely to be further from their desired level of heating, and as such, would be assumed to spend a greater level of any increase in income on additional energy demand. Hence, it was considered appropriate to assume a greater elasticity of demand in this case.<sup>38</sup> It should be noted that this is a conservative assumption, and relative to observed income elasticities of demand (usually estimated as less than 0.2), adjusting the income elasticity for eligible households

<sup>35</sup> Data from Expenditure and Food Survey for 2008

<sup>36</sup> Expenditure is modelled as expenditure required to achieve adequate standard of thermal comfort in the home as defined under the fuel poverty definition (21°C in main living area and 18°C in all other occupied rooms). Data is projected for 2008 using data from the English Housing Survey.

<sup>37</sup> Jamasb, T. and Meier, H. (2010); 'Household Energy Expenditure and Income Groups: Evidence from Great Britain'; Working paper CWPE 1011 & EPRG 1003

<sup>38</sup> The Government is currently working through the NEED database project in order to better understand the energy demand response of interventions in the household sector.

upwards to 0.5 will lead to an understatement of the Net Present Value of each of the Policy Options. This is because this assumption increases the estimated costs associated with increases in energy demand.

121. Any increase in net energy consumption has three associated costs: the energy resource cost<sup>39</sup>, the costs associated with additional greenhouse gas emissions and the negative impact on air quality. The estimated impacts of support through energy bills under each Policy Option are set out in Table 10.

**Table 10 – Cost associated with increasing energy use (Present Values, 2009 Prices)**

Policy Option	Estimated Scenario	2011/12	2012/13	2013/14	2014/15	Total
1	Resource Impact (£m)	41.6	41.9	41.0	39.4	164.0
	Greenhouse Gas Emissions Impact (£m)	18.0	18.1	17.8	17.2	71.1
	Air Quality Impact (£m)	3.3	3.5	3.6	3.5	13.9
	<b>Total NPV Impact (£m)</b>	<b>63.0</b>	<b>63.5</b>	<b>62.4</b>	<b>60.1</b>	<b>249.0</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.349	0.358	0.359	0.353	1.419
2	Resource Impact (£m)	45.6	47.4	47.5	44.4	185.0
	Greenhouse Gas Emissions Impact (£m)	19.6	20.4	20.5	19.3	79.9
	Air Quality Impact (£m)	3.7	3.9	4.1	3.9	15.6
	<b>Total NPV Impact (£m)</b>	<b>68.9</b>	<b>71.7</b>	<b>72.2</b>	<b>67.7</b>	<b>280.5</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.381	0.405	0.415	0.397	1.598

122. The sensitivity of these results to elasticity and price assumptions, and information on the methodology used for estimating the impacts can be found in the Greenhouse Gas Specific Impact Test and Annex 10 below.

123. Policy Option 2 results in higher costs than Policy Option 1 in terms of both higher total costs associated with changes in energy use, and the components of resource use, greenhouse gas emissions and air quality impacts. This is driven primarily by the estimated level of support under Policy Option 2 being greater than Policy Option 1. This is mainly because under Policy Option 1 support is assumed to continue at a similar level to the current voluntary agreement, whereas under Policy Option 2 the number of households receiving support is estimated to increase. As a result under Policy Option 2 overall energy use is expected to increase more as a result of support than under Policy Option 1.

#### **Monetised Costs: Administrative Costs**

124. The delivery of support would result in some administrative costs for both Government and energy suppliers. Under both options, there would be an administrative cost associated with identifying eligible households, administering benefits and monitoring and enforcing expenditure. However, Policy Option 2 would also include additional administrative functions associated with the reconciliation and data-matching processes.

125. The following table provides an estimate of the administrative costs and burden on energy suppliers of the scheme. The costs cover the costs of monitoring and auditing (based on Ofgem estimates); data-matching (based on the experience of the Energy Rebate Scheme); and the burden that would be placed on energy suppliers in complying with the scheme, where estimates have been based mainly on the information

<sup>39</sup> This valued at the long-run variable cost of energy supply.

gathered through the assessment of how benefits were delivered under the voluntary agreement and cost estimates of verification of benefit based on discussions and evidence from consumer groups.

**Table 11 – Administrative costs for Government and Suppliers of Support via Energy Bills (£m, 2009 constant prices)<sup>40</sup>**

Policy Option	Administrative Cost (£m) to	2010/11 (transitional cost)	2011/12	2012/13	2013/14	2014/15	Total
1	Government	0.4	1.3	1.1	1.1	1.1	5.0
	Business	1.1	8.9	3.1	3.1	1.9	18.2
	<b>Total</b>	<b>1.6</b>	<b>10.2</b>	<b>4.2</b>	<b>4.2</b>	<b>3.0</b>	<b>23.2</b>
2	Government	1.0	5.6	6.4	6.8	5.0	24.8
	Business	0.4	1.2	5.3	8.8	8.5	24.2
	<b>Total</b>	<b>1.3</b>	<b>6.8</b>	<b>11.7</b>	<b>15.6</b>	<b>13.5</b>	<b>49.0</b>

126. Policy Option 2 is expected to have a larger total administration cost than Policy Option 1. This is driven by the additional administrative functions associated with both the reconciliation and data-matching mechanisms, and verification of eligibility of households supported through the Broader Group. Therefore the higher cost is a consequence of the better targeting under Policy Option 2.

### Benefits and Costs: Net Present Value Summary

127. The Net Present Values of each option are presented in the following table alongside estimates of the numbers of households removed from fuel poverty, a key non-monetised benefit of a support through energy bills scheme.

**Table 12 – Key results for Policy Options (2009 prices, net present values)**

Policy Option	Summary	Scheme Year					Total
		2010/11 (set-up cost)	2011/12	2012/13	2013/14	2014/15	
1	NPV (£m)	-1.6	39.2	48.3	51.9	54.5	192.4
	Net reduction in number of fuel poor households per annum		-41,000	-46,000	-55,000	-58,000	
2	NPV (£m)	-1.3	143.0	173.5	170.3	165.0	650.5
	Net reduction in number of fuel poor households per annum		-88,000	-87,000	-102,000	-98,000	

128. It is estimated that Policy Option 2 would have a significantly higher NPV compared to Policy Option 1. Although both Policy Options would have similar costs associated with administration and a net increase in energy consumption, Policy Option 2 would have a larger equity weighted benefit across society.

129. Better targeting towards fuel poor households under Policy Option 2 through the Core Group would direct a greater proportion of resources towards low income households. This would increase the equity weighted value of support provided, and would remove a larger number of households from fuel poverty.

### RISKS AND ASSUMPTIONS

130. The costs and benefits of support through energy bills have been estimated using particular assumptions around the structure of the scheme, the success of identifying eligible households and external factors. In practice, a number of risks around these assumptions could result in variation in these costs and benefits.

<sup>40</sup> The estimated administrative costs here have been updated since the consultation stage impact assessment. For details see Annex 12.

### **Risk 1: Future increases in energy prices**

131. Energy prices have increased significantly over recent years and are expected to continue to increase in the future, partially due to the Government's energy and climate change policies.
132. If the increase in the average household energy bill is significantly larger than expected, a large number of households would shift into fuel poverty as a result. This is a risk under both Policy Options.
133. Under a high energy price scenario, a support through energy bills scheme would remove fewer households from fuel poverty as the assistance provided would represent a smaller proportional reduction in the household energy bill.
134. Under any energy price scenario, support through bills would still allow eligible households to improve the thermal comfort of the home and increasing energy prices would increase the importance of providing assistance to households vulnerable to fuel poverty.
135. Any support through bills policy could only provide assistance up to the total level of obligation. If energy prices rise significantly, it may be appropriate to assess whether the policy is continuing to provide the most appropriate level of support to the most appropriate group of vulnerable households within that overall level.

### **Risk 2: Variation in success of data-matching and sweep up exercises**

136. The costs and benefits estimated under Policy Option 2 assume a certain success in finding eligible Core Group households through the automatic match process and the process ("sweep up") for those who did not match automatically. The modelling assumes a data matching success rate of 78%<sup>41</sup>, which is a conservative assumption as it is higher than the success rate under the Energy Rebate Scheme (a pilot scheme for data-matching). In practice, however, the success of data-matching could be greater or less than assumed, leading to more or fewer households receiving Core Group support. This is likely to be a risk mainly in the first year of the scheme, as in subsequent years it should be possible to more accurately model expected data matching and sweep up success rates. Should there be any over or under-spend on the Core Group in one year (relative to the announced envelope), suppliers will be able to bank any overspend to the following year (it is likely that this would be reflected through a reduction against the following year's *non-Core* Group obligation), or borrow from the following year's obligation to offset any under-spend in the current year. This would mitigate the risk of large over or under-spends.
137. If a smaller number of households are identified due to data-matching and sweep up being less successful than anticipated, energy suppliers would be required to spend a smaller proportion of the total obligation on the Core Group.
138. If a smaller number of eligible Core Group households receive support in any year of the scheme, this is likely to decrease the equity weighted benefit of support through bills and also the impact of this support on fuel poverty: fewer households would be removed from fuel poverty. Further, if suppliers are required to make up this expenditure in other types support under the scheme, this could increase the administration burden on energy suppliers to identify a greater number of households.
139. The consequent impacts of more successful data-matching and sweep up exercises would be the opposite of the above.
140. The assumption regarding the potential success of data-matching is informed by the experience of the Energy Rebate Scheme, which provided a fixed rebate to a small subset of Pension Credit recipients in 2010 who were identified through data-matching and sweep up. This Scheme was useful in testing the potential

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<sup>41</sup> This success rate is based on data testing following the Energy Rebate Scheme, and is a revision of the 80% rate assumed in the Warm Home Discount consultation impact assessment. This takes account of the decision for eligibility to be based on bill payer, rather than household.

success of data-matching and in informing any potential sensitivity around the future success of a data-matching exercise.

**Risk 3: Large increase in take-up of eligible benefit**

141. The potential size of any eligible Core Group is estimated using up to date Department for Work and Pensions (DWP) forecasts regarding the number of claimants of Pension Credit for the duration of the scheme.<sup>42</sup> These forecasts include assumptions around the take up of Pension Credit, as not all those that are eligible claim the benefit. DWP report that between 62% to 73% of those eligible for Pension Credit take up the benefit. Take-up is higher for Guarantee Credit only, and lower for Savings Credit only.<sup>43</sup>
142. Low take-up is reported to be a consequence of low awareness of Pension Credit and the rules around eligibility. However, take-up among households eligible for Guarantee Credit and both Guarantee and Savings Credit has increased over time to 2008/09.
143. If the take-up of the benefit used to target Core Group support significantly increases after the eligibility criteria for the scheme is set, this would significantly increase the number of households potentially identified through data-matching. Higher take-up could be further incentivised by the provision of the additional support benefit to eligible households.
144. Although, this risk could increase the equity weighted benefits of support through bills and its impact on fuel poverty, increasing the number of households identified in the Core Group could create a risk that expenditure rises above the total level of the obligation.
145. This risk can be mitigated by setting Core Group eligibility that can be accommodated within the overall level of the obligation and frequently reviewing this eligibility to ensure affordability. Also, as highlighted under Risk 2 above, there is scope for suppliers to bank any overspend to the following scheme year, or borrow from the following year's allocation to offset any under-spend on the Core Group in the current year. This is a risk only under Policy Option 2.

**Risk 4: Households which are not vulnerable to fuel poverty benefit under the obligation**

146. There is a risk in the delivery of the scheme that, due to the difficulties with identifying fuel poor households, some households which are not fuel poor or vulnerable to fuel poverty benefit under the obligation. This risk could reduce both the equity weighted benefit of support, as some relatively well-off households receive support, and would also reduce the impact on fuel poverty. This is a risk for both Policy Options considered but, given the lack of data-matching, is a larger risk for Policy Option 1.
147. A first mitigating action is to ensure that the design of the data-matching process minimises this risk. This would be done through making the eligibility date for the extraction of data from the energy suppliers and DWP are as close to each other as possible (to reduce the likelihood that individual circumstances change) and minimising the time between those extract dates and the data matching taking place. We will also ensure that the match routines, data cleansing and 'fuzzy matching' type approaches balance the desire to increase the automatic match rates to increase the number of automatic rebates paid and improve the customer experience with the need to minimise the number of those not eligible for the benefit receiving it.
148. The proposed delivery approach is for a Government call centre to be in place to confirm eligibility of those not automatically matched but are sent a letter asking them to provide additional information to confirm their eligibility. These letters will only be sent to those who are eligible for the subset of Pension Credit, and the Government call centre will be able to confirm this customers call. Customers will have to confirm who their energy supplier was on the eligible date and this will be confirmed by the energy supplier before the rebate is paid. As a result there will be a low risk of payments being made to ineligible customers.

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<sup>42</sup> DWP do not published detailed forecasts regarding caseloads of Guarantee Credit or Savings Credit, but an overall Pension Credit forecast is available here (Tab C1): [http://research.dwp.gov.uk/asd/asd4/alltables\\_budget2010.xls](http://research.dwp.gov.uk/asd/asd4/alltables_budget2010.xls)

<sup>43</sup> DWP (2010); 'Income-related benefits: Estimates of take ups'; available at [http://statistics.dwp.gov.uk/asd/index.php?page=irb\\_2](http://statistics.dwp.gov.uk/asd/index.php?page=irb_2)

149. Secondly, energy suppliers will be required to direct expenditure under the other sections of the obligation towards appropriate households which are in or are vulnerable to fuel poverty.<sup>44</sup> Suppliers will be required to have any eligibility criteria used to identify households to support under the Broader Group approved by Ofgem. The Cold Weather Payment criteria have been identified as a set of criteria that could act as a guide for suppliers, and Ofgem will automatically approve eligibility criteria in line with this set. As the Cold Weather Payment includes claimants of Pension Credit, who will to a large extent covered by the Core Group, suppliers will be expected to target Broader Group support at other subsets of the Cold Weather Payment criteria – this is made clear in the scheme regulations.
150. A third mitigation factor is the introduction of a verification process for households receiving support under the Broader Group. The process will:
- a. Require suppliers to obtain from potential recipients a declaration of their eligibility;
  - b. Require suppliers to inform potential recipients that they may be asked to provide further evidence of eligibility; and
  - c. Require suppliers to show that they have documentary evidence of eligibility for 5% of those that rebates were paid to.

### **Key Assumptions**

151. The key assumptions associated with the modelling of the costs and benefits are set out in the appropriate sections of the Annex (sections 7, 8, 9 and 10), alongside sensitivity analysis which is conducted around the potential size of these benefits.

## **SPECIFIC IMPACT TESTS**

### **Impact on competition**

152. This section considers the competition impact of a support via energy bills scheme. The general assessment is made against two key criteria:
- a. does the policy directly or indirectly limit the number or range of suppliers in the market and;
  - b. does the proposal limit the ability of suppliers to compete?

#### Does the policy limit the number or range of suppliers?

153. The powers in the Energy Act 2010 allow the Secretary of State to require energy suppliers to make support available to assist some of their vulnerable customers. This requirement creates no direct restriction on the number of firms that can compete in the market.
154. As detailed above, a requirement to provide support would result in some costs to energy suppliers, both in terms of the benefits provided to eligible customers and administrative costs of participation. It is likely that suppliers will recoup these costs through higher energy prices.
155. It is possible that the costs of participating in support schemes may be disproportionately high for smaller suppliers. For example, where some of the costs of participation are fixed, this will disadvantage suppliers that have a smaller customer base over which to recoup costs. A requirement to participate in a support scheme could therefore act as a barrier to entry for new firms. For this reason, a *de minimis* threshold will be put in place, below which an energy supplier would not be required to participate in the scheme. Government recently conducted a consultation on raising the threshold at which energy suppliers are required to participate in DECC environmental and social programmes, and the threshold for the Warm Home Discount scheme has been informed by this. The threshold for the Warm Home Discount has been set at 250,000 customer accounts. This impact on entry and on smaller suppliers is discussed further in the following section regarding the impact on small businesses.

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<sup>44</sup> See the consultation response that accompanies this impact assessment for further details.



## Does the proposed policy limit the ability of suppliers to compete

156. A requirement to provide support through bills could impact on competition through one or both of the following:
- a. impacting on the incentives for customers to engage in switching behaviour; and
  - b. making it more difficult for energy suppliers to compete on a even footing

### *Impact on switching behaviour*

157. A support through bills scheme could impact on competition to the extent that the requirements of the scheme affect the incentives for some consumers to actively participate in the market and engage in switching behaviour. This could happen, for example, where the policy results in a reduction in the price differential between tariff offers or in a reduction in the diversity of tariffs on offer.
158. The way in which the benefit is specified and delivered to households could therefore have an impact on switching behaviour. As discussed above, relative to the other ways in which a benefit could be delivered, a lump-sum rebate would have the lowest impact on competition in energy markets as it would not interfere with underlying tariff structures and would maintain cost-reflective pricing. This means that customers would be more likely to continue to look across all tariff offerings to search for the best deal available and in turn, would also mean that firms are more likely to continue to compete for customers across the entire market.
159. The way in which eligibility for support is specified could also have an impact on switching behaviour. Where there are clear criteria that households are entitled to receive a benefit under the scheme, as proposed under the Core Group, the switching behaviour of customers in this group is unlikely to be affected. These customers would be able to look across the offerings of all participating suppliers in order to find the best deal for them and can still be confident that they will receive a benefit irrespective of which company is supplying their energy.
160. Customer switching could be reduced where no clear criteria are set for which types of households are eligible or there is no entitlement to a benefit. For example, households that receive a benefit under the current voluntary agreement may be reluctant to switch supplier as the householder may not be confident that it would be able to receive a benefit from a different supplier. This could happen where alternative suppliers were already supporting sufficient households to meet their prescribed level of expenditure.

### *Impact on competition between suppliers*

161. A support through energy bills scheme could impact on competition between suppliers where one or more suppliers are required to bear a disproportionate share of the costs of the policy. This situation could arise where:
- a) A particular supplier has a disproportionate number of customers in that are entitled to a benefit under the scheme: suppliers with a greater exposure to entitled households would be obligated to fund a greater proportion of the total expenditure. If this exposure is disproportionate to their energy market share, energy prices set by these suppliers would become distorted, as a larger than average cost per consumer would be passed through. Further, the group which is assigned a right to receive support may become less profitable and hence less attractive for suppliers to serve. This could affect the extent to which energy suppliers compete for these types of customers. Our proposal is to overcome these issues through implementing an effective reconciliation mechanism that would ensure that the costs of the obligation to provide support to a Core Group are shared fairly across obligated energy suppliers.
  - b) The aggregate amount that is mandated to be spent through the Legacy and Broader Groups and the Industry Initiatives is shared amongst suppliers in an inequitable manner: this situation can be avoided by ensuring that the obligation on suppliers is set with regard to each suppliers' market share.<sup>45</sup>

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<sup>45</sup> For this scheme the market share for each supplier will be calculated based on the number of customer accounts.

## Impact on small businesses

162. Some of the costs of participating in a support through energy bills scheme are unlikely to scale with the size of the obligation on the supplier (for example, the technical cost of applying benefits to household energy accounts, which is likely to require some up-front changes to billing systems that may not scale with the number of benefits that a particular supplier has to apply). Hence, smaller suppliers could be disadvantaged by having to participate in the scheme, as they may incur disproportionately large set-up and ongoing administrative burdens.
163. Further, the imposition of these larger administrative costs may present a greater challenge for smaller energy suppliers as relative to their larger competitors as:
- a. they are likely to have more limited tariff variability and a smaller customer base over which to recover the costs
  - b. for some smaller suppliers who attract consumers through price competition, the customer base over which they could spread the costs is likely to be more price sensitive and;
  - c. smaller suppliers have smaller cash flows, placing these businesses at greater risk of cash flow problems over the period (e.g. they may face cash-flow difficulties from having to make a large number of payments to eligible even where those payments are later reconciled).
164. This is why the scheme will have a *de minimis* threshold, specified in terms of a number of customer accounts, below which an energy supplier will not be required to participate in the scheme. This will ensure that support through energy bills would not represent a barrier to entry to the energy supply market.
165. While a *de minimis* threshold will reduce the barriers to entry for new firms, it will create some other impacts on competition:
- a) It could make it difficult for small suppliers to attract the types of customers that would be eligible for a benefit with a larger suppliers. A household that is currently purchasing energy from a small supplier that would be eligible for a benefit through the scheme may decide to switch to a participating supplier in order to claim a benefit. The Warm Home Discount scheme will make provisions for smaller suppliers to be able to voluntarily opt-in to offering benefits to the Core Group.<sup>46</sup>
  - b) It could create a barrier to smaller suppliers to grow their customer base above the *de minimis* level: When suppliers that were previously excluded from the obligation gain enough customers to pass over the threshold, at this point the supplier will face the full administrative costs of participating in the scheme. This would be compounded by the costs of having to participate with other policies which carry a similar threshold.
166. While the creation of the *de minimis* threshold may have an impact on the ability of small suppliers to compete, it is necessary to balance this against the potential impact of a policy that requires all suppliers to participate in the full scheme. In this case we would be exposing all suppliers, irrespective of size, to the policy and administrative costs of the scheme.
167. The impact of excluding smaller suppliers from the obligation using a *de minimis* threshold will be determined by how many households in the Core Group smaller suppliers hold. Those smaller suppliers which compete on energy price are more likely to supply eligible customers than those which offer energy to households willing to pay a premium for lower-carbon energy. However, on the whole, smaller energy suppliers hold only a very small proportion of the total energy supply market.<sup>47</sup> Hence, excluding smaller suppliers from the scheme is likely to have only a small impact on the ability of the scheme to provide a benefit to the defined eligible group.
168. A requirement for small suppliers to participate in the obligated scheme is likely therefore to put existing small suppliers at a competitive disadvantage and would potentially create a barrier to entry of new firms.

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<sup>46</sup> The administrative burden of complying voluntarily with the Core Group would be smaller than complying with other parts of the scheme or with the scheme as a whole due to the data-matching exercise. This would mitigate the need for small suppliers to identify eligible households. If smaller suppliers voluntarily opted-in to offering benefits to the Core Group, they would also participate in the reconciliation mechanism.

<sup>47</sup> Ofgem, Energy Supply Probe – Initial Findings Report, available at:

<http://www.ofgem.gov.uk/Markets/RetMkts/ensuppro/Documents1/Energy%20Supply%20Probe%20-%20Initial%20Findings%20Report.pdf>

Hence, allowing smaller energy suppliers to voluntarily participate in the Core Group would overcome any potential negative impact on smaller businesses of being included in the scheme, whilst maintaining the potential for all eligible households to receive support.

## Impact on Health

169. The provision of support through energy bills to those vulnerable to fuel poverty aims to allow households to increase the level to which they heat their home. Increasing indoor temperatures would have a positive impact on the health of household members, removing to some extent the potential health risks associated with living in poorly heated homes.
170. Living in cold conditions is linked to a number of detrimental physical and mental health impacts. A recent study concluded that inadequate levels of heating and fuel poverty are linked, in particular, to respiratory problems in children and an increased risk of mortality in older adults.<sup>48</sup> Other sources also highlight the risk of respiratory problems among adults and the potential development of influenza, pneumonia and asthma, alongside an increased risk of arthritis and accidents at home linked to poorly heated housing.<sup>49</sup>
171. Raising indoor temperatures and the alleviation of fuel poverty are both found to reduce stress among adult household members<sup>50</sup>, through improving the perception of thermal comfort and increasing the affordability of energy bills respectively. There is further evidence reporting that risk of poor mental health was also high among adolescents who lived for a long period in homes which lack affordable warmth.<sup>51</sup> An improvement in mental well-being associated with improved indoor temperatures is expected to have a consequent positive impact on the physical health of household members.
172. Estimating the true impact of assisting households through providing support on bills is problematic due to uncertainties around the response to receiving support and the demographic structure of recipient households and complexity between these and the determinants of their health status.
173. The impact of support through energy bills on the health of the household would depend on household preferences for heat and their income elasticity of demand for heating, which will determine to what temperature the home is heated to before and after assistance. Further, if a household chooses to take some of the benefit they receive as a increase in income and spend it on other consumption items, what these consumption items are may also have an impact on the health of household members.<sup>52</sup>
174. When the household receives assistance and how this correlates with periods of cold winter temperature will also influence the households preferences for heat and the risk of ill health which is mitigated through an improvement in thermal comfort.
175. The health impact of assistance would also depend on particular demographic characteristics of the household, for example:
  - a. whether any household member has any underlying health conditions and how these interact with any potential temperature change;
  - b. how many of the household members are pensioners, children or have a long-term sickness or disability, or are from other groups which are particularly vulnerable to ill health as a consequence of low indoor temperatures and;
  - c. what the drivers of mental health are for each household member
176. It also worth noting that the impact on health would also be determined by characteristics of the dwelling in which the householder lives. For example, the type of fuel used to heat the home would determine any air quality impact of increasing heating, and the thermal efficiency of the home will determine the ability of the household to achieve an increase in thermal comfort.

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<sup>48</sup> Green, G. and Gilbertson, J. (2008); 'Warm Front *Better Health*: Health Impact Evaluation of the Warm Front Scheme', CRESR

<sup>49</sup> Liddell, C. and Morris, C. (2010): 'Fuel Poverty and Human Health: A Review of Recent Evidence'; Energy Policy, Vol. 38, Issue 6, p. 2987-2997

<sup>50</sup> Green, G. and Gilbertson, J. (2008); *ibid*

<sup>51</sup> Barnes, M. et al (2008); 'The Dynamics of Bad Housing: The Impact of Bad Housing on the Living Standards of Children'; National Centre for Social Research, London

<sup>52</sup> Department of Health (2010): 'Health Impact Assessment; Case Studies; Examples of good practice by government departments carrying out Health Impact Assessment as part of Impact Assessment'

177. Hence, the extent of the positive impact on the health after receiving assistance will be determined by the interaction of a number of characteristics inherent to the individual household.
178. Although the link between poor housing conditions and detrimental health impacts is well documented, there is no set methodology which can define a set of given health outcomes associated with a given increase in indoor temperature.<sup>53</sup>
179. If it was possible to robustly link an improvement in heating conditions to an improvement in health outcomes then it would also be possible to monetise this impact. An improvement in the health of household members would have a number of benefits which could be given a monetary value if the methodology existed. For example, improved health would result in:
- a. savings in health care provision as a result of fewer visits to GPs/hospitals;
  - b. smaller losses to businesses as a result of worker ill health; and
  - c. fewer lost school days as a consequence of child ill-health<sup>54</sup> and a reduction in the consequent required care in these periods
180. There would also be an intrinsic value placed by the household member on its improved health and there is evidence to suggest that poor housing may contribute, alongside a number of other consequences of deprivation, to increased anti-social behaviour and crime in children who grow up in poor housing conditions.<sup>55</sup> Increasing the thermal temperature of the home through by providing support in paying energy bills could contribute somewhat towards reducing the extent that poor housing conditions are a factor in driving anti-social activity.

### **Impact on greenhouse gas emissions**

181. On average, households which are fuel poor or vulnerable to fuel poverty are likely to significantly under-heat the home (see costs section above). Providing a fixed rebate on the energy bills of a subset of vulnerable consumers would effectively increase the income of these consumers and would allow these households to increase their energy consumption and reach a more adequate standard of warmth.
182. Any increase in household energy consumption would lead to an associated increase in greenhouse gas emissions and reduction in air quality.
183. Since energy suppliers are likely to recoup the costs of the policy through increasing energy prices, non-eligible households are expected to experience an increase in their average annual energy bill and so are anticipated to decrease their consumption of energy in response. The net impact on energy consumption across all households would be determined by the differential response to changes in household energy bill between the two sets of households.
184. The size of the response of households to receiving support would be determined by a number of household characteristics and the nature of support provided. It would depend on;
- a. the initial level of energy consumption and temperature to which the home is heated;
  - b. household preferences over energy consumption for heat relative to alternative goods;
  - c. the thermal efficiency of the home and;
  - d. how the objective of the support is communicated to recipients households
185. These factors are represented by the household elasticity of energy demand with respect to a change in income, which is used to determine the anticipated response of households to changes in their domestic energy costs. The estimated changes in emissions as a consequence of a net increase in energy consumption are included in the Table 13 (as noted above in the section on 'Impact on energy consumption,

<sup>53</sup> DECC is undertaking a research project with the objective of helping us to better understand the health implications of energy interventions in the household sector.

<sup>54</sup> Chapman, R. et al. (2009): 'Retrofitting houses with insulation: A cost-benefit analysis of a randomised community trial'; J Epidemiol and Community Health 2009;63:271-277

<sup>55</sup> Liddell, C. and Morris, C. (2010): 'Fuel Poverty and Human Health: A Review of Recent Evidence'; Energy Policy, Vol. 38, Issue 6, p. 2987-2997

greenhouse gas emissions and air quality', the use of an income elasticity is likely to under-estimate the impact of Policy Option 1).

**Table 13 – Estimated increase in emissions of greenhouse gases (Mt CO<sub>2</sub>e)**

Policy Option	Sector	2011/12	2012/13	2013/14	2014/15	Total
1	Traded	-0.001	-0.001	-0.001	-0.001	-0.005
	Non-Traded	0.350	0.360	0.361	0.354	1.424
2	Traded	0.000	0.000	0.000	0.000	0.000
	Non-Traded	0.381	0.404	0.415	0.398	1.598

186. For greater detail on the methodology and income elasticities used to estimate the changes in energy use following assistance, see Annex 10.

### Rural Proofing test

187. Although more fuel poor households live in urban areas, a greater proportion of rural households are fuel poor than those living in urban areas. In 2008, around 25% of households residing in village, hamlet and isolated dwellings were fuel poor relative to 15% of households living in urban areas.<sup>56</sup>

188. Households in rural areas are more likely to be fuel poor, in part, as a consequence of the type of houses in which they live. Rural houses tend to have lower levels of thermal efficiency<sup>57</sup> and are often larger than houses in urban areas.<sup>58</sup> As a consequence, rural households often have larger costs of achieving an adequate standard of thermal comfort in the home.

189. Houses in rural areas tend also to be harder to treat and require larger levels of investment to improve the efficiency of the household. This is in part a consequence of a larger prevalence of houses not connected to the gas grid<sup>59</sup> which need to use relatively more costly fuels to heat the home.

190. The higher propensity of fuel poverty among rural households means that it is important to ensure that rural households are not precluded from accessing assistance provided through energy bills. Two considerations must be taken into account to ensure that access is provided to potentially eligible households residing in rural areas:

a. Many rural households may be excluded from receiving support if support was provided through household gas bills. Hence, it is proposed that the energy bill reduction should be applied to the household electricity account such that households which are not connected to the gas grid are also able to receive support. Much of the support under the voluntary agreement was provided through social and discounted tariffs on gas accounts. However, it is intended that this expenditure is managed down over time and replaced by an increase in resources in the Core and Broader Groups.

b. Discretion will be given to suppliers as how expenditure under the Broader Group, Legacy Spend and Industry Initiatives would be allocated. The methods through which energy suppliers attempt to identify benefitting households for this support could be problematic for rural households if they cannot access the processes or information regarding how to apply for support, for example, if suppliers take up partnerships with services which are primarily located in urban centres. However, the risk of this is likely to be minimal as under the voluntary agreement, suppliers used a range of media to market that support through bills was available, for example, direct mailings, advertising on websites and call centre referrals, all of which could be accessed by potential eligible households living in rural areas.

### Impact on Equality

191. The findings of the Equality Impact Assessment for the preferred option are shown in matrix form in Table 14. Overall, these indicate that none of the aspects discriminate against any of the groups under the Equality

<sup>56</sup> DECC Fuel Poverty Detailed Tables 2008, available from: [http://www.decc.gov.uk/en/content/cms/statistics/fuelpov\\_stats/fuelpov\\_stats.aspx](http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx)

<sup>57</sup> In 2007, the average SAP of a rural house was 44, relative to 51 for an urban home.

<sup>58</sup> The average floor area of a rural home in 2007 was around 113m<sup>2</sup>, relative to only 87m<sup>2</sup> in urban homes.

<sup>59</sup> Around 93% of urban houses were connected to the gas grid in 2007, relative to only 66% of rural homes.

Act 2010, but positive and negative impacts are identified for certain equalities groups. Detailed findings for each of the aspects are described in Annex 11.

**Table 14 – Summary of Equality Impact Assessment findings**

Equality Duty	Eligibility for Core Group	Eligibility for Broader Group	Eligibility for Legacy Spend	Industry Initiatives	Methods of Policy Delivery	Ability of HHs to respond
Age	Positive + Negative	Positive	Positive	Positive	Positive	Negative
Race	Potential	No Impact	No Impact	No Impact	Positive + Negative	Negative
Disability	No Impact	Positive + Negative	Positive + Negative	Positive	Positive + Negative	Negative
Gender	Positive	No Impact	No Impact	No Impact	No Impact	No Impact
Transgender	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Sexual Orientation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Religion/Belief	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Marriage/Civil Part'ship	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Pregnancy/Maternity	Negative	No Impact	No Impact	No Impact	No Impact	No Impact

Positive	= Does not discriminate against group, and only has positive impacts on group
Positive + Negative	= Does not discriminate against group, has positive impacts for some within group and negative impacts for others
Negative	= Does not discriminate against group, but has negative impacts on the group
Potential	= Does not discriminate against group, has potential impacts on the group, but no evidence for them
Discriminates	= Discriminates against group under Equality Act 2010

# Annexes

## Annex 1: Post Implementation Review (PIR) Plan

**Basis of the review:** The Warm Home Discount runs for four years, and will be reviewed on an ongoing basis, including an annual report by Ofgem as is also currently published under the voluntary agreement. This will inform the development of fuel poverty policy during and after the expiration of the scheme.

Further, throughout the scheme period, the scheme regulations will provide the Secretary of State with the opportunity to officially review the scheme in the case of a significant change in circumstances or where an aspect of the scheme is not operating effectively or where its effectiveness could be improved.

**Review objective:** The objective of any formal review during the course of the scheme period, other than Ofgem's annual report, will be; to determine whether any significant change in circumstances have had a significant impact on the effectiveness of the scheme; or to assess a particular aspect of the scheme to ensure that it is operating effectively or to improve its effectiveness, such that the scheme can achieve its objectives.

A review of the scheme after the scheme period has concluded would assess what impact the scheme has had in terms of the schemes objectives. In particular, it would seek to establish what impact the Warm Home Discount had on fuel poverty over the course of the scheme period.

**Review approach and rationale:** An interim review, other than Ofgem's annual report, into the effectiveness of a particular aspect of the scheme or into the impact of a significant change in circumstances would be narrowly focused and in-depth into that particular aspect of or impact on scheme. This is would involve consultation with the scheme suppliers and Ofgem if it affects the delivery or operation of the scheme, and would involve wider consultation if it impacts more on the potential impacts of the scheme, for example, around eligibility issues.

A final review of the scheme is more likely to be wider, encompassing an assessment of all aspects of the scheme, their performance and their impact on the effectiveness of the scheme to achieve its intended objectives. This would involve consultation with the scheme suppliers, auditor, and wider stakeholders to gain additional information regarding the scheme and its impacts.

Any review would also draw heavily on the information regarding the number of benefits which have been supplied under the scheme through information gathered by the Ofgem, the scheme auditor.

**Baseline:** Any interim review of the scheme, other than Ofgem's annual report, would be conducted against the expected operation and delivery of the scheme as set out in the consultation response regarding the structure of the scheme.

The baseline for assessing the overall impact of the policy over the complete scheme period would be the Do Nothing scenario. Under this scenario, after the end of the voluntary agreement in March 2011, the amount of support offered by energy suppliers would likely significantly decrease and there would be no guarantee that any support would be available to assist vulnerable households through their energy bills.

**Success criteria:** The success criteria for both an interim or final review of the scheme would consist of a number of criteria regarding the benefits delivered and their impact.

Each expenditure allocation under price support would be assessed to determine the number of assistance provided and its performance against its intended ability to provide a benefit to the appropriate households as set out in the consultation document. Further, the impact of the scheme as a whole on fuel poverty would be assessed.

**Monitoring information arrangements:** A number of sources of information would be available to facilitate a rigorous assessment of the scheme. The number of households assisted through the Core Group would be directly available to Government as the data-matching process will report this data directly to reconciler as part of the reconciliation process, and will therefore be available at two different points in each year.

Further, energy suppliers would have to submit information to Ofgem regarding the number of benefits offered under the Core Group, Broader Group and Legacy Spending elements of the scheme. Any expenditure and intended impacts of Industry Initiatives expenditure would need to be pre-approved and reported on by Ofgem on annual basis. Ofgem are expected to produce a report within 4 - 5 months of the end of each financial year.

**Reasons for not planning a review:** N/A



## ANNEX 2

All tables adapted from the Ofgem report, *Monitoring Suppliers' Social Spend 2009-10*.<sup>1</sup>

**Table A2.1 – Voluntary agreement expenditure on social and discounted tariffs in 2008/9**

Energy Supplier	Tariff Name	Total Savings to Customers (£m)	Number of benefiting customer accounts*	Average level of benefit per customer account
<b>British Gas</b>	Essentials	£72.5m	493,099	£147
	Price Promise	£4.8m	23,180	£210
<b>EDF Energy</b>	Energy Assist	£8.8m	145,012	£61
<b>E.ON</b>	Staywarm Social	£15.6m	48,591	£321
	Warm Assist	£0.04m	3,290	£13
<b>npower</b>	First Step	£0.96m	4,580	£210
	Spreading Warmth	£11.32m	109,256	£104
<b>Scottish Power</b>	Fresh Start	£1.47m	71,235	£21
	Carefree Plus	£0.04m	3,287	£13
<b>SSE</b>	Energyplus Care	£14.87m	102,940	£145
<b>Total</b>		<b>£130.4m</b>	<b>1,004,470</b>	<b>£130</b>

\* as of 31/03/09

**Table A2.2 – Voluntary agreement expenditure on other social initiatives in 2008/9**

Energy Supplier	Rebates (Total savings to customers)	Trust Funds (Amount donated)	Partnership Initiatives	Energy Efficiency Initiatives	Other Initiatives	Total Expenditure
<b>British Gas</b>	£0.02m	£3.3m	£1.00m	-	-	-
<b>EDF Energy</b>	N/A	£2.24m	£0.32m	-	-	-
<b>E.ON</b>	£3.64m	£0.4m	£0.15m	-	-	-
<b>npower</b>	£0.15m	£2.76m	£0.11m	-	-	-
<b>Scottish Power</b>	£4.37m	£2.3m	£1.98m	-	-	-
<b>SSE</b>	£1.69m	N/A	£0.23m	-	-	-
<b>Total</b>	<b>£9.9m</b>	<b>£11.0m</b>	<b>£3.79m</b>	<b>£1m</b>	<b>£1.11m</b>	<b>£26.8m</b>

Notes: N/A denotes where a supplier did not implement an initiative of this type; '-' denotes where expenditure differentiated by suppliers is not reported

<sup>1</sup> Available at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Monitoring%20Suppliers%20Social%20Spend%202009-10.pdf&refer=Sustainability/SocAction/Suppliers/CSR>

**Table A2.3 – Voluntary agreement expenditure on social and discounted tariffs in 2009/10**

Energy Supplier	Tariff Name	Total Savings to Customers (£m)	Number of benefiting customer accounts	Average level of benefit per customer account
<b>British Gas</b>	Essentials	£44.3m	476,602	£93
	Price Promise	£2.8m	20,261	£138
<b>EDF Energy</b>	Energy Assist	£11.9m	163,978	£73
<b>E.ON</b>	Staywarm Social	£8.9m	22,510	£395
	Warm Assist Fixed	£2.1m	17,100	£123
	Warm Assist	£0.3m	4,734	£73
<b>npower</b>	First Step	£0.4m	1,768	£251
	Spreading Warmth	£15.6m	109,945	£142
<b>Scottish Power</b>	Fresh Start	£7.5m	84,673	£89
<b>SSE</b>	Energyplus Care	£21.5m	108,811	£198
<b>Total</b>		<b>£113m</b>	<b>1,010,382</b>	<b>£112</b>

\* as of 31/03/10

**Table A2.4 – Voluntary agreement expenditure on other social initiatives in 2009/10**

Energy Supplier	Rebates (Total savings to customers)	Trust Funds (Amount donated)	Partnership Initiatives	Energy Efficiency Initiatives	Other Initiatives	Total Expenditure
<b>British Gas</b>	£5.8m	£3.3m	£1.3m	-	-	-
<b>EDF Energy</b>	N/A	£2.7m	£0.6m	-	-	-
<b>E.ON</b>	£4.0m	£0.4m	£0.4m	-	-	-
<b>npower</b>	N/A	£4.0m	£0.2m	-	-	-
<b>Scottish Power</b>	£3.6m	£2.2m	£0.6m	-	-	-
<b>SSE</b>	£1.8m	N/A	£0.2m	-	-	-
<b>Total</b>	<b>£15.3m</b>	<b>£12.5m</b>	<b>£3m</b>	<b>£7.5m</b>	<b>£1.5m</b>	<b>£39.8m</b>

Notes: N/A denotes where a supplier did not implement an initiative of this type; '-' denotes where expenditure differentiated by suppliers is not reported

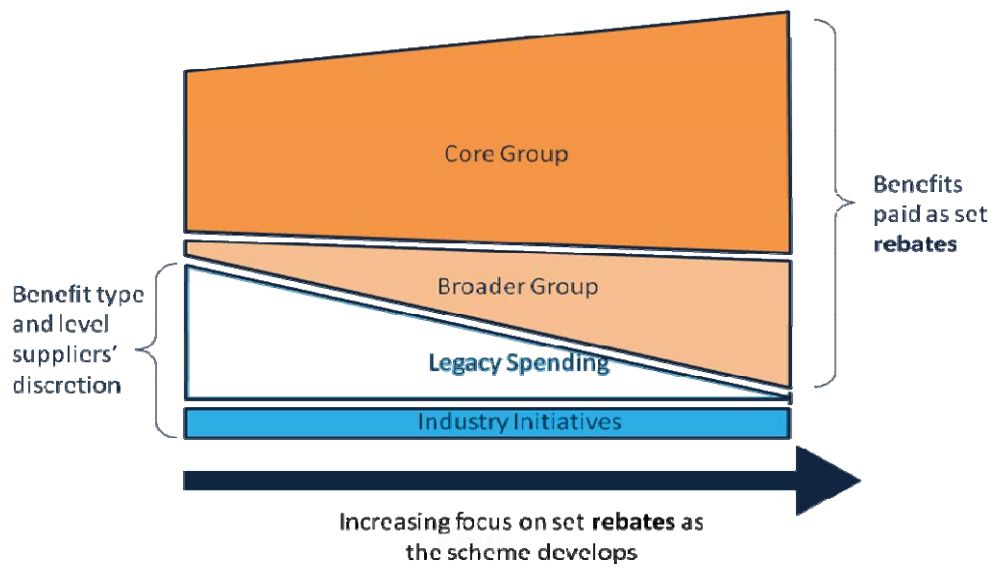
## ANNEX 3

### Data-matching and the Energy Rebate Scheme

1. Households in the Core Group will be targeted by using the proxy of their receipt of a subset of Pension Credit. These proposals are based on the success of the 2010 Energy Rebate Scheme which provided rebates to over 205,000 households in receipt of the Guarantee element only of Pension Credit aged over 70 and proved that data matching between Government and six different private sector organisations can work.
2. DECC, DWP and the six major energy suppliers (British Gas, EDF Energy, eon, nPower, ScottishPower, and Scottish and Southern Energy and their subsidiary companies) worked together on the Energy Rebate Scheme. This was a one-year exercise to provide an £80 energy supplier funded rebate on electricity bills for the poorest pensioners. The scheme was also an opportunity to review the contribution data sharing could make to help target assistance at fuel poor households in the future.
3. Customers were eligible for the rebate if they were over 70 (or their partner was over 70); receiving the guarantee credit element of Pension Credit; and living at home. In addition, this person (or their partner) had to be responsible for paying the electricity bill at the place where they lived and not in receipt of a social or discounted tariff from their energy supplier.
4. Data matching was used to identify eligible customers. Department for Work and Pensions (DWP) benefit information was compared against information from suppliers about their customers. This match was carried out on DWP's behalf by HP. Suppliers were only provided with information about who among their own customers was eligible for the benefit.
5. Over 182,000 households (53% of the DWP eligible group) were 'matched' so received the benefit automatically without having to make a claim. In addition, over 160,000 letters were sent out from DWP to those customers who may be eligible and if so needed to provide additional information to confirm their eligibility. These customers had until 31<sup>st</sup> August 2010 to provide further information and claim their rebate if they were eligible. Of these 'unmatched' customers, over 23,000 of them contacted the dedicated helpline and provided enough information to confirm their eligibility.

# ANNEX 4

Diagram A4.1 – indicative structure of the Warm Home Discount model and how expenditure is expected to change over time



# ANNEX 5

Table A5.1 – Discussion of different types of support through energy bills

Type of Tariff	Competition Assessment	Impact	Other Benefits	Other Costs
<b>Fixed Rebate</b>	<ul style="list-style-type: none"> <li>Underlying tariff structure remains unchanged and incentive for consumers to continue to look across tariffs for the best deal remain unchanged</li> <li>Tariff innovation by suppliers is not restricted and they retain a strong incentive to compete for eligible households who remain active consumers in the market</li> </ul>		<ul style="list-style-type: none"> <li>Provides certainty and transparency to eligible households regarding level of benefit received</li> <li>Easier for suppliers to plan and achieve expenditure requirement</li> <li>Relatively simple to audit and reconcile</li> <li>Preserves incentive for consumers to make prudent use of energy</li> </ul>	<ul style="list-style-type: none"> <li>Level of support is not adjusted to household need</li> </ul>
<b>Social Tariff</b>	<ul style="list-style-type: none"> <li>Eligible customers are switched to a tariff which must be at least as good as the lowest tariff offered by that supplier to a customer in that region on an enduring basis<sup>2</sup>.</li> <li>The incentive for consumers to search for alternative tariffs is reduced if the consumer believes that they are receiving the best tariff</li> <li>These inactive consumers become less likely to switch, reducing competition for these consumers</li> </ul>		<ul style="list-style-type: none"> <li>Reassurance for consumers that they are receiving the cheapest tariff available with their supplier regardless of their payment method.</li> <li>Level of benefit depends on consumption and is hence automatically scaled to household need</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to determine the level of benefit as an adequate comparison tariff is required</li> <li>Difficult to monitor and reconcile as would need information regarding both household consumption and tariff levels</li> <li>Suppliers at risk of under or over-spending on their obligation as level of benefit would be unknown until end of expenditure period</li> <li>Provision of multiple tariffs by different suppliers adds complexity to a consumers decision to switch</li> <li>If social tariffs differ between suppliers, recipient consumers could be better off by switching to another supplier</li> </ul>
<b>Fixed Unit Price</b>	<ul style="list-style-type: none"> <li>This option requires Government to set the tariff at which the fixed unit price is set, effectively removing this group from the competitive market. This is likely to lead to a reduction in switching behaviour and market competitiveness</li> </ul>		<ul style="list-style-type: none"> <li>Level of benefit depends on consumption and is hence automatically scaled to household need</li> </ul>	<ul style="list-style-type: none"> <li>Difficult to audit and reconcile as energy price and household consumption information is required</li> <li>Suppliers at risk of not fulfilling required expenditure as level of benefit is unknown before end of period</li> </ul>
<b>Bill Capping</b>	<ul style="list-style-type: none"> <li>The incentive for consumers to switch under bill capping would be removed, withdrawing these households from the competitive market</li> <li>With no incentive to switch, these households are removed from the competitive market. These households could also become unprofitable to serve due to energy consumption without cost above the cap. These factors could lead to reduced competition between suppliers to attempt to attract these households</li> </ul>		<ul style="list-style-type: none"> <li>Potential to provide assurance to households that they can achieve an adequate level of warmth at a fixed cost</li> <li>Level of benefit adjusts to household characteristics</li> <li>Would remove household from fuel poverty if cap is set at below 10% of household income</li> </ul>	<ul style="list-style-type: none"> <li>Above the cap, households have no incentive to conserve energy</li> <li>Difficult to reconcile and audit as would have to have information on both energy prices and household consumption</li> <li>Difficult for suppliers to plan required expenditure</li> <li>Different households would require different caps. Would be costly to set cap at level appropriate for all households.</li> </ul>

<sup>2</sup> Excludes short term online offers

<p><b>Percentage Discount</b></p>	<ul style="list-style-type: none"> <li>• Consumers remain on underlying tariffs and as such still have an incentive to switch to find the best tariff. However, switching is slightly more complex as the level of discount depends on the level of consumption, making it more difficult to compare across tariffs</li> <li>• Further, the percentage reduction reduces the differential between energy tariffs</li> <li>• Less active consumers results in less competitive activity by suppliers for these consumers, relative to a fixed rebate</li> </ul>	<ul style="list-style-type: none"> <li>• Level of benefit depends on consumption and is hence automatically scaled to household need</li> <li>• Easier for recipient consumers to judge the level of benefit received than social and fixed unit tariffs or bill capping. Not as transparent as fixed rebate</li> </ul>	<ul style="list-style-type: none"> <li>• More difficult to audit and reconcile than fixed rebate as have to know information regarding energy bills on which discount is applied</li> <li>• Also relatively difficult for energy suppliers to plan expenditure as the level of benefit received will depend on consumption of household</li> </ul>
<p><b>Proportional Rebate</b></p>	<ul style="list-style-type: none"> <li>• Consumers remain on underlying tariffs and therefore retain the incentive to compare tariffs between suppliers. However, as benefit depends on amount of energy consumed, comparisons between suppliers is relatively complicated in comparison with a fixed rebate, which may restrict the ability of consumers to switch supplier,</li> </ul>	<ul style="list-style-type: none"> <li>• Level of benefit depends on consumption and is hence automatically scaled to household need, however, not to the extent that social tariffs or percentage discount would</li> <li>• Clear to consumers how much support they will receive relative to their energy consumption</li> </ul>	<ul style="list-style-type: none"> <li>• More difficult to audit and reconcile than fixed rebate as have to have information regarding energy consumption in order to determine level of rebate</li> <li>• Difficult for energy suppliers to plan expenditure as level of support depends on household energy consumption.</li> </ul>

## Annex 6

Table A6.1 – Assessment of vulnerable groups for Core Group

Low income household	Pensioner household	Household with child	Household with long-term sick or disabled member
<p><b>Can an appropriate target proxy be identified? (Number of households)</b></p>	<p>All Pension Credit: 2.7m All Guarantee Credit: 2.2m Guarantee Credit Only: 1.0m Type of benefit receipt can be combined with age threshold to reduce group size<sup>3</sup></p>	<p>All Child Tax Credit: 4.3m CTC with income &lt;£19,999 before benefit: 1.9m CTC with income &lt;£9,999 before benefit: 1.0m Income thresholds can be used to restrict the size of the eligible group<sup>4</sup></p>	<p>Income Support with a disability premium: 1.1m<sup>5</sup> Since October 2008, those who would have been eligible for income support with a disability premium are now eligible for Employment and Support Allowance</p> <p>Lower income ESA recipients will receive income-based ESA, with those with more severe conditions located in the Support Group Income-based ESA: 0.2m<sup>6</sup></p> <p>Potential appropriate benefits are in a period of transition as low income disabled households begin to claim ESA, leading to uncertainty in overall size and growth of eligible group between years</p>
<p><b>High risk of Poor Health due to fuel poverty?</b></p>	<p>Older, poorer pensioners are more likely to be at risk of excess winter death than any other household type. Over the last five years, the average number of excess winter deaths in households with a member above 65 was around 26,000 per annum of an average annual total of 28,000 across all ages. This figure rose to 33,000 of a total 37,000 EWD's in winter 2008/09<sup>7</sup>.</p> <p>The adverse impacts of living in cold homes for older people, such as respiratory problems, cardiovascular disease, arthritis and rheumatism, are likely to become entrenched over the years<sup>8</sup> Alongside an increased risk of morbidity due to cold temperatures, poorer pensioner households are also likely to be at risk of higher levels of anxiety and depression and poorer mental well-being associated with the stress of being unable to afford energy bills<sup>9</sup>.</p>	<p>Children, alongside elderly people, are at significantly greater risk of developing respiratory problems as a consequence of damp or mouldy conditions in poorly heated housing<sup>10</sup>.</p> <p>Studies have found that damp housing is related to respiratory conditions in children<sup>11</sup>, with one reporting that respiratory problems were more than twice as prevalent in children who lived in homes which lacked affordable warmth<sup>12</sup>. In another study, infants living in homes which were not given a winter fuel subsidy were 30% more likely to be admitted to hospital or primary care clinics in the first 3 years of their life and were also 29% more likely to be underweight due to burning more calories to keep warm and eating less due to 'heat or eat' dilemma<sup>13</sup>.</p>	<p>The long-term sick are likely to spend a significant amount of time in the home. As such, housing conditions are an important factor in the prevention of both further ill health and providing a suitable environment to aid recovery. The WHO notes that a good thermal indoor climate, alongside other conditions, is especially important to aid recovery<sup>14</sup>. Further, low temperatures are reported to potentially delay recovery after discharge from hospital<sup>15</sup></p>

<sup>3</sup> Data is sourced from the DWP tabulation tool (available at; <http://83.244.183.180/100pc/tabtool.html>); statistics are for February 2010

<sup>4</sup> HMRC (2010); 'Child and Working Tax Credits Statistics: April 2010'; available at; <http://www.hmrc.gov.uk/stats/personal-tax-credits/cwtc-apr2010.pdf>

<sup>5</sup> Data is sourced from DWP estimates

<sup>6</sup> Data sourced from DWP statistics for Employment and Support Allowance; (available at; <http://statistics.dwp.gov.uk/asd/index.php?page=esa>); statistics are for February 2010

<sup>7</sup> ONS (2009); Excess Winter Mortality Dataset – by age group and region; available at; <http://www.statistics.gov.uk/statbase/ssdataset.asp?vlnk=7089>

<sup>8</sup> Liddell, C. (2008); 'The impact of fuel poverty on children'; available at; [http://www.savethechildren.org.uk/en/54\\_7169.htm](http://www.savethechildren.org.uk/en/54_7169.htm)

<sup>9</sup> Eaga (2009); *ibid*

<sup>10</sup> WHO (2009); 'Damp and Mould; Health risks, prevention and remedial actions; information brochure' available at; [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/78636/Damp\\_Mould\\_Brochure.pdf](http://www.euro.who.int/__data/assets/pdf_file/0003/78636/Damp_Mould_Brochure.pdf)

<sup>11</sup> Howden-Chapman, P. (2004); 'Housing standards: A glossary of housing and health'; *J Epidemiol Community Health*: 58: 162-168

<sup>12</sup> Barnes, M. et al (2008); *ibid*

<sup>13</sup> Child Health Impact Working Group (2006); 'Unhealthy Consequences: Energy Costs and Child Health'; available at; [http://www.childrenshealthwatch.org/upload/resource/ENERGY\\_CHIA.pdf](http://www.childrenshealthwatch.org/upload/resource/ENERGY_CHIA.pdf)

<sup>14</sup> WHO (1988); 'Guidelines for Healthy Housing'; available at; [http://whqlibdoc.who.int/euro/ehs/EURO\\_EHS\\_31\\_part2.pdf](http://whqlibdoc.who.int/euro/ehs/EURO_EHS_31_part2.pdf)

<sup>15</sup> Howden-Chapman, P. (2004); *ibid*

<p><b>Propensity to be Fuel Poor?</b></p>	<p>Both pension credit and poorer child tax credit recipient households will have a high propensity to be fuel poor at any one time as fuel poverty is highly correlated with low income and these households are likely to reside in the lowest income deciles</p>		<p>Income support with a disability premium and income based ESA are targeted at low-income households with a long-term sick or disabled member and as such, are likely to contain a large number of fuel poor households. However, it is expected that the propensity to be fuel poor is lower than for alternative low-income vulnerable households, as households with a long-term sick or disabled member are also likely to be receiving other benefits related to their individual needs which increase income</p>
<p><b>Stability of group?</b></p>	<p>On average, households receiving pension credit have a very stable level of income over time relative to other low income households. Analysis has found that around 80% of pension credit recipient households are likely to still be receiving pension credit after three years<sup>16</sup>.</p>	<p>Households with children experience changes in circumstance more often than households with pensioners, and child tax credit recipient households have less stable income flows over time. Analysis has found that only around 40% of households claiming child tax credit are still likely to be claiming the benefit after three years</p>	<p>Although no formal assessment of the stability of recipients of income support with a disability premium or ESA has been undertaken, around 70% of poorer households receiving DLA or AA were found to be still both receiving DLA or AA and have low income after three years. Poorer households with a long-term sick or disabled member are therefore more likely to experience a change in household circumstances over time relative to poorer pensioner households, possibly reflecting that a greater proportion of these households are still active in the labour market.</p>
<p><b>Impact on incentives to engage in labour market?</b></p>	<p>Around 91% of all people over 65 were not economically active in May-July 2010<sup>17</sup>. Providing support to a low income pensioner group would not significantly impact on work incentives for households as the majority of people within these households are likely to be inactive, and the value of support is likely to be marginal relative to the income received through employment</p>	<p>Households with dependent children have the highest rate of economic activity across the three groups. In April-June 2010, only 14% of all households with dependent children were economically inactive<sup>18</sup>. Providing support to this group would have the largest impact on incentives to work as a greater proportion of the total obligation would be directed towards households with an economically active member. However, the size of support would be marginal relative to the benefits received through employment and receiving support would not be determined by employment status</p>	<p>In October-December 2009, around 47% of disabled people were economically active<sup>19</sup>. Further, a household with a disabled or long-term sick member is more likely to host an employed member than that of pensioner households. However, support is likely to only have a marginal impact on the incentives to work for this group due to the intended size of rebate and as support would not be dependent on employment status.</p>

<sup>16</sup> Analysis was carried out using the BHPS and assessed how household income and benefit receipt changed over time in the same households. Figures are indicative and approximate however the relative positioning of the two groups is reliable

<sup>17</sup> ONS (2010); 'Labour Market Statistics: September 2010'; available at; <http://www.statistics.gov.uk/pdfdir/lmsuk0910.pdf>

<sup>18</sup> ONS (2010b); 'Household and family participation in the labour market', available at; <http://www.statistics.gov.uk/cci/article.asp?id=2569>

<sup>19</sup> ONS (2010c); 'Employment and Labour Market Review'; Vol. 4, No.6, available at; <http://www.statistics.gov.uk/cci/article.asp?ID=2442>



# ANNEX 7

## Fuel Poverty Modelling to Identify a Suitable Core Group

1. A number of scenarios are identified for analysis to show the trade-offs between targeting different Pension Credit eligible groups with different levels of benefit per household under the Core Group expenditure.
2. The impact of different Core Group scenarios on households vulnerable to fuel poverty are assessed against the following metrics:
  - a. Impact on the number of fuel poor households
  - b. Impact on the number of households which suffer a severe level of fuel poverty detriment (defined here as households with a fuel poverty ratio larger than 20%).
3. The impacts of the different scenarios are assessed using a fuel poverty model. The fuel poverty model contains information regarding the propensity to be fuel poor of a representative sample of the population, using data from the English Housing Survey. In the model, the appropriate number of benefits of the prescribed size are assigned to eligible households, impacting on the fuel poverty ratio of individual households. These impacts are subsequently scaled over all households to gain the total impact of each Core Group scenario.
4. The total expenditure under different scenarios varies widely and some scenarios represent total levels of expenditure significantly below that which will be dedicated to the Core Group under the Warm Home Discount scheme. However, these scenarios are identified to analyse the trade-offs between either targeting a large number of households with a small level of benefit or a small number of households with a large benefit, and between targeting different subsets of Pension Credit recipients. Hence, the scenarios are specified to inform the selection of the appropriate eligible group, as opposed to presenting formal options for potential Core Groups.

### Assumptions

5. The level of benefit that each recipient household would receive in the scenarios modelled is based on the average level of benefit of £130 per year, which is the average level for the Warm Home Discount scheme as a whole, and is also the average value of the benefit received by social and discounted tariff recipients under the first year of the voluntary agreement. Variation around this level is specified such that the trade-offs between different levels of benefit could be identified.
6. The size of the different groups are estimated using data from Department for Work and Pensions (DWP) forecasts which split the number of Pension Credit claimants by age and type for each year of scheme.<sup>20</sup> The estimated sizes of the Core Group in Table A7.1 are based on the number of Pension Credit claimants forecast for 2011/12. The estimated number of recipient households is made by taking into account that some households would not be eligible for support as they live in care homes and applying an estimate for the success of a data-matching exercise. This estimate is informed by the success rate of the Energy Rebate Scheme.
7. The fuel poverty metrics calculate the net impact on households vulnerable to fuel poverty. In the Core Group modelling, it is assumed that energy suppliers pass through the costs of the Core Group as a fixed lump sum on all domestic energy consumers. As such, all non-eligible households experience an increase in their energy bill, leading to some households shifting into fuel poverty as a result.

### Results

8. The following table outlines in more detail the scenarios that were modelled and the impact on the different fuel poverty metrics of the different Core Group scenarios.

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<sup>20</sup> These forecasts are not published at this level of detail, but are consistent with overall Pension Credit take up forecasts published here: (Table C1) [http://research.dwp.gov.uk/asd/asd4/alltables\\_budget2010.xls](http://research.dwp.gov.uk/asd/asd4/alltables_budget2010.xls)

Table A7.1 – Fuel poverty modelling for different potential Core Group Scenarios

Eligibility Criteria	Number of HHs in receipt of support	Level of support to HHs (£pa)	Total Spend on Core Group (£m)	Number of HHs Removed from Fuel Poverty	Spend per HH removed from Fuel Poverty	Number of HHs removed from extreme fuel poverty	Spend for HH removed from extreme Fuel Poverty
60+ Guarantee Credit only	807	£100	£81m	27,000	£3,000	24,000	£3,400
60+ Guarantee Credit only	807	£130	£105m	38,000	£2,800	32,000	£3,300
60+ Guarantee Credit only	807	£160	£129m	51,000	£2,500	34,000	£3,800
70+ Guarantee Credit only	345	£100	£34m	18,000	£1,900	8,000	£4,300
70+ Guarantee Credit only	345	£130	£45m	14,000	£3,200	12,000	£3,700
70+ Guarantee Credit only	345	£160	£55m	23,000	£2,400	16,000	£3,400
60+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	1,477	£100	£148m	56,000	£2,600	35,000	£4,200
70+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	913	£100	£91m	35,000	£2,600	18,000	£5,100
70+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	913	£130	£119m	45,000	£2,600	25,000	£4,700
70+ A Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	913	£160	£146m	61,000	£2,400	33,000	£4,400
80+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	439	£100	£44m	16,000	£2,700	9,000	£4,900
80+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	439	£130	£57m	21,000	£2,700	13,000	£4,400
80+ Guarantee Credit <i>plus</i> Guarantee Credit <u>and</u> Savings Credit	439	£160	£70m	24,000	£2,900	19,000	£3,700
70+ All Pension Credit	1,360	£100	£136m	55,000	£2,500	20,000	£6,800

Notes: 'HHs' = Households

# ANNEX 8

## Equity weights theory and methodology

9. In the cost-benefit analysis of the different Policy Options, equity weights are used to capture the value placed on the transfers by different households.
10. It is expected that energy suppliers would pass on the costs of the obligation to their customer base. There are a large number of ways in which they could spread these costs across both their domestic and industrial consumers. To provide a conservative estimate of the equity value to society, it is assumed that suppliers pass all the costs of the obligation as a fixed lump sum across all domestic customer accounts. Hence, support through energy bills is effectively a transfer of resources from a relatively rich to a relatively poorer set of households.
11. While the value of these transfers in cash terms sums to zero, the welfare impact of these transfers to society will depend on the types of households that are receiving benefits. Poorer households place a greater value on an additional unit of income as income is assumed to have a diminishing marginal utility. Hence as household income increases, the marginal utility of an additional unit of income decreases.
12. Using the methodology set out in the *Green Book*, equity weights can be used to capture the welfare value of making support payments to vulnerable households. This additional benefit to society is calculated by applying a larger weight to transfers to or from poorer households. The equity weights used are contained in the following table, and are based on the latest income data from the English Housing Survey.

**Table A8.1 – Equity weights used to assess transfers of support through energy bills**

Income Decile	1	2	3	4	5	6	7	8	9	10
Equity weight attached to transfer to or from this group	3.5	2.5	1.9	1.6	1.3	1.1	0.9	0.8	0.6	0.4

13. Using the equity weights, an additional £1 for *any* household in the lowest income decile would be valued at £3.5, whereas an additional £1 to *any* household in the highest income decile would be valued at £0.4.
14. The transfers to or from each income decile are multiplied by the relevant equity weights. As assistance under both Policy Options is targeted towards poorer households, the support represents a transfer from relatively richer to relatively poorer households and hence has a significantly positive equity weights value to society.

## ANNEX 9

### Modelling to identify the number of households removed from Fuel Poverty

1. A key non-monetised benefit of both Policy Options is the impact in terms of alleviating fuel poverty. The analysis includes an estimation of the potential impacts of different options for delivering support through bills on fuel poverty according to the following metrics:
  - a. Impact on the number of fuel poor households; and
  - b. Impact on the number of households suffering from severe fuel poverty (defined here as households with a fuel poverty ratio of 20% or more).
2. The impacts of the different options are modelled in the same way as the modelling under the Core Group scenarios using the fuel poverty model, as detailed in Annex 7.
3. It is uncertain exactly which households would receive benefits under both options, particularly as many of the benefits administered are at the discretion of energy suppliers. Hence a number of assumptions were made to facilitate the fuel poverty modelling and are set out below.

#### **Assumptions: Policy Option 1**

4. The benefits provided and the types of households targeted are expected to be similar to the level that has been delivered through the current voluntary agreement (albeit on a larger scale). In the second year of the voluntary agreement, around 1.6 million customer accounts benefited from a social tariff or a rebate, averaging £84 per account per annum overall.
5. The average level of benefit is therefore assumed to be £84 for households assisted under Policy Option 1, and this benefit is assumed to remain constant over the four years of the scheme. The number of households assisted per £1m of obligation expenditure is assumed to be the same as under the voluntary agreement. Hence, the number of assisted households increases proportionally with the overall amount of the obligation.
6. Information has been gathered from energy suppliers by Ofgem detailing eligibility for support under the voluntary agreement. Using this information, eligibility for the various schemes available under the voluntary agreement was estimated.
7. Further, the amount of expenditure directed by energy suppliers towards industry initiatives under the obligation is also expected to increase in proportion to the total level of the obligation. As energy suppliers assist a larger number of households as the obligation increases, the activities undertaken to identify potentially eligible households would also have to increase.

**Table A9.1 – Policy Option 1 modelling assumptions (Nominal Prices)**

<b>Assumption</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Expenditure on direct benefits	£217m	£238m	£260m	£269m
Number of households assisted (000s)	2,579	2,837	3,095	3,198
Average level of benefit	£84	£84	£84	£84
Expenditure on industry initiatives	£33m	£37m	£40m	£41m
Total expenditure	£250m	£275m	£300m	£310m

## **Assumptions: Policy Option 2**

8. Under Policy Option 2, the benefits under the Core Group are assigned in the fuel poverty model to a proxy group representing the appropriate subset of households in receipt of Pension Credit. Benefits under the Legacy Spending are assumed to be distributed according to the same profile as the distribution of benefits awarded under Policy Option 1.
9. The number of expected recipients under the Core Group is estimated using data on the numbers of claimants of the eligible subset of Pension Credit from DWP forecasts.<sup>21</sup> This group is then reduced to produce an estimate of the number of potential recipients by adjusting for the number of households not eligible as they live in care homes, and for the anticipated success of data-matching, which is informed by the success rate in the Energy Rebate Scheme.
192. Energy suppliers will be required to direct expenditure under the Broader Group towards appropriate households which are in or are vulnerable to fuel poverty. Suppliers will be required to have any eligibility criteria used to identify households to support under the Broader Group approved by Ofgem. The Cold Weather Payment criteria have been identified as a set that could act as a guide for suppliers, and Ofgem will automatically approve eligibility criteria in line with this set.
193. It is uncertain which criteria suppliers will seek Ofgem to approve to find households to support under the Broader Group. However, as Ofgem will automatically approve the eligibility criteria used for Cold Weather Payments, we believe it is reasonable to assume that the income distribution of households eligible for Cold Weather Payments is an appropriate proxy for households under the Broader Group.

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<sup>21</sup> These DWP forecasts are not published at this level of detail, but are consistent with overall Pension Credit take up forecasts available here: (Table C1) [http://research.dwp.gov.uk/asd/asd4/alltables\\_budget2010.xls](http://research.dwp.gov.uk/asd/asd4/alltables_budget2010.xls)

**Table A9.2 – Policy Option 2 modelling assumptions (Nominal Prices)**

Assumption		2011/12	2012/13	2013/14	2014/15
Core Group	Total Expenditure (£m)	£97m	£143m	£159m	£190m
	Total number of recipient households (000s)	807	1,097	1,179	1,355
	Level of benefit per household (£pa)	£120	£130	£135	£140
	Eligibility	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit).	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). 80 and over and in receipt of Pension Credit Guarantee Credit and Savings Credit.	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). 75 and over and in receipt of Pension Credit Guarantee Credit and Savings Credit.	In receipt of Pension Credit Guarantee Credit only (i.e. no Savings Credit). All in receipt of Pension Credit Guarantee Credit and Savings Credit.
Broader Group	Total expenditure (£m)	£3m	£47m	£88m	£90m
	Number of recipient households (000s)	26	364	654	645
	Level of benefit per household (£pa)	£120	£130	£135	£140
Legacy Spending	Total expenditure (£m)	£130m	£65m	£33m	£0m
	Number of recipient households (000s)	1,548	774	387	0
	Average Level of benefit per household (£pa)	£84	£84	£84	£84
	Expenditure on industry initiatives	£20m	£20m	£20m	£30m
Total Expenditure	Total expenditure (£m)	£250m	£275m	£300m	£310m

10. Under each Policy Option, the industry initiatives are assumed to have no direct impact on fuel poverty as there is large uncertainty as to how much resource will be directed towards providing direct benefits to the household, through for example, energy efficiency measures, and how much will be dedicated towards activities such as partnerships, which improve targeting. Further, if the allocation of spending is known, it would be difficult to model the impact of particular types of initiatives on fuel poverty such as energy efficiency helplines.
11. Each Policy Option is compared against the counterfactual scenario under Do Nothing, where we assume that energy suppliers significantly reduce the amount of benefits offered to vulnerable households after the expiry of the voluntary agreement. As there is great uncertainty as to what benefits would be made available by energy suppliers, it is assumed that no benefits are offered under the Do Nothing scenario and as such, there is no impact on households vulnerable to fuel poverty.
12. In each modelled year, the fuel poverty model adjusts for changes in energy prices and incomes between different years such that the estimated impact on fuel poverty of each Policy Option takes into account the impact of expected increases in energy prices over time.
13. The full detail of the results of the fuel poverty modelling for the different Options are included in the tables below.

**Table A9.3 – Fuel poverty modelling results of Policy Option 1**

<b>Metric</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Number of fuel poor households removed	-115,000	-120,000	-125,000	-130,000
Number of households shifted into fuel poverty	75,000	74,000	70,000	72,000
<b>Net impact on number of fuel poor households</b>	<b>-41,000</b>	<b>-46,000</b>	<b>-55,000</b>	<b>-58,000</b>
Number of households removed from severe fuel poverty	-31,000	-31,000	-28,000	-30,000
Number of households shifted into severe fuel poverty	10,000	3,000	10,000	12,000
<b>Net impact on number of severe fuel poor households</b>	<b>-21,000</b>	<b>-28,000</b>	<b>-18,000</b>	<b>-19,000</b>
<b>Average impact on energy bills of non-eligible households (Nominal Prices)</b>	<b>£10</b>	<b>£11</b>	<b>£12</b>	<b>£12</b>

**Table A9.4 – Fuel poverty modelling results for Policy Option 2**

<b>Metric</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Number of fuel poor households removed	-161,000	-158,000	-169,000	-172,000
Number of households shifted into fuel poverty	73,000	71,000	67,000	74,000
<b>Net impact on number of fuel poor households</b>	<b>-88,000</b>	<b>-87,000</b>	<b>-102,000</b>	<b>-98,000</b>
Number of households removed from severe fuel poverty	-57,000	-58,000	-58,000	-59,000
Number of households shifted into severe fuel poverty	9,000	4,000	11,000	10,000
<b>Net impact on number of severe fuel poor households</b>	<b>-48,000</b>	<b>-55,000</b>	<b>-47,000</b>	<b>-49,000</b>
<b>Average impact on energy bills of non-eligible households</b>	<b>£10</b>	<b>£11</b>	<b>£12</b>	<b>£12</b>

## ANNEX 10

### Estimating the impacts of support through bills on energy usage, greenhouse gas emissions and air quality

33. Support will be provided to households to increase the affordability of achieving an adequate standard of heating within the home. As poorer households tend to under-heat the home, assisted households are expected to increase their energy consumption for heating in response to receiving the benefit.
34. Non-eligible households, which are anticipated to experience an increase in the average energy bill, are expected to reduce their energy consumption as a consequence.
35. The net change in energy use would be determined by the relative demand elasticities between the two groups. Any net change in energy will have a cost associated with the resulting change in energy used, the change in greenhouse gas emissions and change in air quality.

#### Methodology

36. To estimate the costs associated with energy resource changes, the nominal benefit to recipient households and cost passed through to non-eligible households are initially converted into the real benefit (2009 prices) to reflect the actual benefit that households will receive in the appropriate year, in constant terms.
37. The real changes in household energy bills for eligible and non-eligible households are converted into changes in energy consumed using income elasticities of demand for both groups, which show by how much a household would change their energy expenditure for a given change in household income, and the retail prices of fuels, to gain units of additional energy consumed.
38. It is assumed that the increases in energy demand for eligible households are all in terms of heating fuels only (including electricity), and not general energy demand. The costs to non-eligible households are assumed to be passed on to all energy bills, and as such, the predicted changes in energy expenditure are split proportionally across fuels according to final energy demand figures for heating and non-heating related usage, and the distributional split of heating methods across households.
39. The income elasticity of demand will vary across different households, therefore we apply different elasticities for each income decile for non-eligible households (see Table A10.1 below). These are determined by a number of demographic characteristics and existing consumption choices of the household.
40. The assumed income elasticities are detailed in the following table. For non-eligible households the elasticities used are those published in Jamasb and Meier (2010).<sup>22</sup> We adjust these up to 0.5 for eligible households.

**Table A10.1 – Income elasticities of energy demand assumed for eligible and non-eligible households**

Income Decile	Non-Eligible Households				Eligible Households
	Gas	Electricity	Oil	Coal	All fuel types
1	0.046	0.033	0.053	0.053	0.500
2	0.050	0.051	0.050	0.050	0.500
3	0.050	0.051	0.050	0.050	0.500
4	0.050	0.051	0.050	0.050	0.500
5	0.050	0.051	0.050	0.050	0.500
6	0.076	0.096	0.061	0.061	0.500
7	0.076	0.096	0.061	0.061	0.500
8	0.152	0.168	0.142	0.142	0.500
9	0.152	0.168	0.142	0.142	0.500
10	0.098	0.087	0.080	0.080	0.500

<sup>22</sup> Jamasb, T. and Meier, H. (2010); 'Household Energy Expenditure and Income Groups: Evidence from Great Britain'; Working paper CWPE 1011 & EPRG 1003



42. The elasticities for the non-eligible group are assumed to be very inelastic. This is likely to reflect the fact that relatively richer non-eligible households are more likely to be consuming closer to their desired level of heat. Further, the impact on household energy bills for non-eligible households are of marginal size relative to the overall energy bill.
43. The income elasticities for eligible households in response to support through bills are assumed to be relatively elastic. This assumption is based on the fact that support is provided to directly facilitate an increase in energy consumption by recipients, and eligible households will be informed as such. Further, the relatively poorer recipient households are more likely to be further from their desired level of heating, and as such, would be assumed to spend a greater level of any increase in income on additional energy demand. Hence, it was considered sensible to have a greater income elasticity of demand in this case.
44. Although it is unlikely that all recipient households will spend the full amount of rebate on an increase in energy consumption, households will not be able to fully anticipate how much they are increasing their energy consumption by and this will only be realised at the end of the period. As such, it may be likely that some consumers may increase their expenditure by more than the level of the rebate.
45. Hence, the elasticities chosen reflect an expectation that a greater amount of the income will be spent on energy by eligible households due to the purpose of support and the time at which support is provided (i.e. during winter).
46. The estimated changes in energy consumption are then valued using DECC's Interdepartmental Analysts Group (IAG) methodology<sup>23</sup> for the valuation of changes in energy use, greenhouse gas emissions and air quality impact.
47. Household income elasticities are assumed to remain constant over the period of the scheme.

#### **Sensitivity analysis around energy prices**

48. Sensitivity analysis is conducted around the costs for Policy Option 2, varying the energy price inputs between a high and low fossil fuel price scenarios, which are set out in the IAG guidance to estimate any potential variation in the costs as a consequence. The carbon prices are also set to high and low to reflect the uncertainty around these and the associated sensitivities. The results presented in the main NPV analysis represent a central fossil fuel price scenario.
49. The costs under each of the fossil fuel and carbon price scenarios are presented in the following table:

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<sup>23</sup> [http://www.decc.gov.uk/en/content/cms/statistics/analysts\\_group/analysts\\_group.aspx](http://www.decc.gov.uk/en/content/cms/statistics/analysts_group/analysts_group.aspx)

**Table A10.2 – Sensitivity in costs associated with different energy price scenarios under Policy Option 2 (Present values, 2010 prices)**

Scenario	Cost	2011/12	2012/13	2013/14	2014/15
<b>Low Prices</b>	Resource Impact (£m)	36.1	37.1	36.8	34.2
	Greenhouse Gas Emissions Impact (£m)	13.1	13.5	13.4	12.6
	Air Quality Impact (£m)	4.5	4.7	4.9	4.6
	<b>Total NPV Impact (£m)</b>	<b>53.6</b>	<b>55.3</b>	<b>55.1</b>	<b>51.4</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.508	0.535	0.542	0.517
<b>High Prices</b>	Resource Impact (£m)	48.8	51.1	51.9	48.9
	Greenhouse Gas Emissions Impact (£m)	26.0	26.8	26.7	24.8
	Air Quality Impact (£m)	3.3	3.5	3.7	3.5
	<b>Total NPV Impact (£m)</b>	<b>78.2</b>	<b>81.4</b>	<b>82.2</b>	<b>77.2</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.337	0.354	0.360	0.340

50. Under a low price scenario, the resource cost is lower in each year than the central scenario used in the main analysis for this impact assessment. Whilst greenhouse gas emissions increase due to lower energy prices, the value of these emissions are lower as lower carbon prices are applied than under the central scenario. The impact on air quality is higher in each year due to the increase in energy consumption compared to the central scenario. This reflects the fact that households will increase the amount to which they increase their consumption in response to receiving a rebate when prices are lower, implying a higher energy consumption and greater greenhouse gas and air quality impact. This higher net consumption has a lower energy value due to the low energy prices.
51. Under the high fossil fuel and carbon price scenario, the resource impact and the value of the change in greenhouse gases are higher than under the central price scenario. This is despite energy consumption being lower, as reflected by the lower level of greenhouse gas emissions and air quality impacts.
52. The sensitivity in energy prices appears not to vary the costs significantly with respect to the wider NPV, with the greatest variation between low and high scenarios being around £24.6m in 2014/15.

#### **Sensitivity analysis around elasticity of demand assumptions**

52. The assumptions made around the relative elasticities of demand between eligible and non-eligible households have been based on a reasonable estimation taking into account how the benefit will be provided and the circumstances of the affected households.
53. These are based on recently published elasticities in Jamasb and Meier (2010), a non-Governmental data source. Therefore, it is necessary to conduct sensitivity analysis around these assumptions to view the impact that their variation may have on the size of the costs and the benefits.
54. Hence, a high and a low scenario have been estimated using the following elasticities:

**Table A10.3 – Elasticities of demand under the low and high sensitivity scenarios**

Scenario	Group	2011/12	2012/13	2013/14	2014/15
Low estimate	Eligible	0.2	0.2	0.2	0.2
	Non-eligible	0.1	0.1	0.1	0.1
High estimate	Eligible	0.8	0.8	0.8	0.8
	Non-eligible	0	0	0	0

55. Under the low scenario, the income elasticity of eligible households is lower than in the central case and the income elasticity of non-eligible households is higher. This is because in combination, these income elasticities will represent a lower bound in terms of the net increase in energy as a result of the policy.
56. The income elasticity of non-eligible households varies less between scenarios as this is considered more robust as it is based on empirical evidence. The elasticities of eligible households varies more as this is less certain. The values chosen represent what is considered as a reasonable variation around the initial assumption.
57. The sensitivity in the costs associated with support with respect to income elasticities are included in the following table, under a central price scenario.

**Table A10.4 – Sensitivity in costs associated with different elasticities of demand scenarios under Policy Option 2 (Present values, 2010 prices)**

Scenario	Cost	2011/12	2012/13	2013/14	2014/15
<b>Low Estimate</b>	Resource Impact (£m)	10.0	10.3	10.4	9.4
	Greenhouse Gas Emissions Impact (£m)	5.4	5.6	5.7	5.2
	Air Quality Impact (£m)	1.0	1.1	1.1	1.0
	<b>Total NPV Impact (£m)</b>	<b>16.3</b>	<b>17.0</b>	<b>17.2</b>	<b>15.7</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.093	0.099	0.102	0.095
<b>High Estimate</b>	Resource Impact (£m)	65.0	67.5	67.8	63.1
	Greenhouse Gas Emissions Impact (£m)	29.0	30.2	30.5	28.5
	Air Quality Impact (£m)	5.3	5.7	6.0	5.7
	<b>Total NPV Impact (£m)</b>	<b>99.3</b>	<b>103.4</b>	<b>104.3</b>	<b>97.3</b>
	Change in Greenhouse Gas Emissions (Mt CO <sub>2</sub> e)	0.553	0.587	0.603	0.574

58. In this case, there is a wider variation in the costs mainly due to the high uncertainty around the income elasticity of eligible households. Although this variation would have a significant impact on the NPV of the scheme, it would not lead to a negative NPV even under the highest elasticity scenario.

# Annex 11

## Equality Impact Assessment

1. This Annex outlines the approach taken and the finding of the Equality Impact Assessment undertaken for Policy Options 1 and 2.

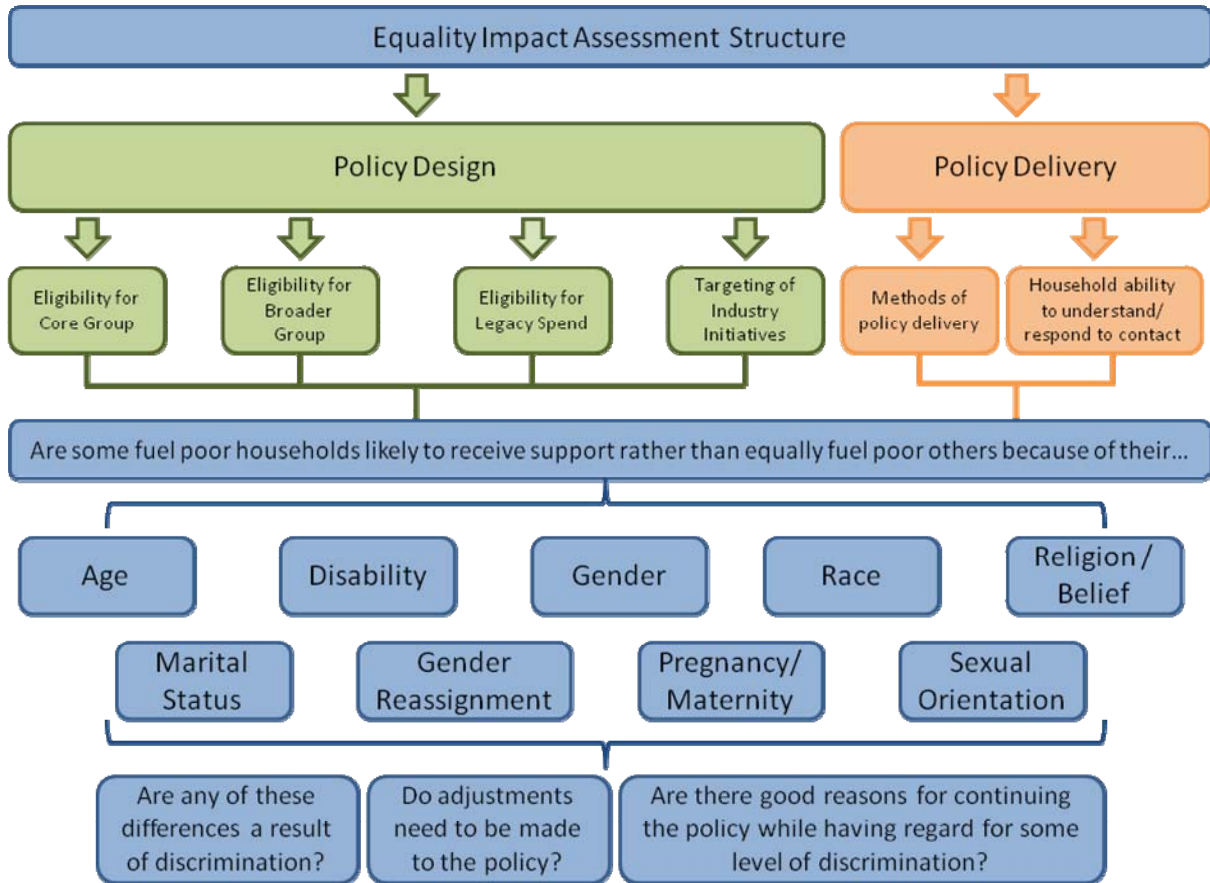
### Approach

2. The purpose of the Equality Impact Assessment is to identify possible positive and negative effects of the Warm Home Discount proposals on different equality groups, gather evidence to support the assessment of impacts and, where necessary, plan actions to address them. This Equality Impact Assessment focuses on the protected characteristics that will be in place from April 2011 under the Equality Act 2010.<sup>24</sup> The protected characteristics are:
  - Age
  - Disability
  - Gender reassignment
  - Marriage and civil partnership
  - Pregnancy and maternity
  - Race
  - Religion or belief
  - Sex/Gender
  - Sexual Orientation.
3. The approach taken in conducting this assessment is summarised in Figure A11.1. Each component of the policy (e.g. eligibility for Core Group, eligibility for Broader Group etc) is considered in turn, and is assessed as to whether it is likely to have positive or negative impacts on certain households compared to others, based on the protected equality characteristics. It is also determined whether any of these differences are a result of discrimination (as defined under the Equality Act 2010).
4. There are two strands in our approach to carrying out this Equality Impact Assessment. In relation to these strands we assess whether the components of the policy under consideration are likely to affect certain groups of households differently to other, equally fuel poor, households which fall into the protected characteristics categories, and determining if these are the result of discrimination. These strands, summarised in Figure A11.1, are:
  - a. **Policy design** – determining whether aspects of the policy, such as the criteria which determine which households are eligible for support, favour certain households over others and whether these are the result of discrimination as defined in the Equality Act 2010; and
  - b. **Policy delivery** – determining whether aspects of how the policy is implemented, such as method of communication (e.g. letter, telephone call, etc) and whether targeted households are able to respond (e.g. due to disability or language constraints), impact on or discriminate against certain households.

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<sup>24</sup> Equality Act 2010, <http://www.legislation.gov.uk/ukpga/2010/15/contents>

**Figure A11.1: Summary Approach to Conducting this Equality Impact Assessment**



5. This Equality Impact Assessment focuses on Policy Option 2 only, as we expect the equality impacts of Policy Option 1 to be the broadly the same as those relating to the 'Eligibility for Legacy Spend' section under Policy Option 2 for the purposes of the Equality Impact Assessment.
6. Each component of the Policy Design and Policy Delivery is assessed through the following process:
  - a. Consider two households that are equally fuel poor, and identical in all aspects other than in terms of one or more of the equality categories shown in Figure A11.1;
  - b. Determine whether this difference(s) is likely to result in one household being more likely or able to receive support over the other;
  - c. If the difference(s) is *unlikely* to favour one household over the other then conclude that the component of the policy will not discriminate on the grounds outlined in Figure A11.1, and that there is no impact. If the difference is considered to favour, or potentially favour, certain groups over others, move on to step (d);
  - d. Determine if the identified impacts on different equalities groups are the result of direct<sup>25</sup> or indirect<sup>26</sup> discrimination as set out in the Equality Act 2010. If discrimination is identified, consider adjusting, changing or stopping the policy. If not, move on to step (e).
  - e. Consider if there are any additional provisions that could be made in the proposed changes that would reduce the likelihood of negative impacts, and increase positive impacts. Where impacts are not equal across groups, determine if there are good reasons for continuing with the policy while having regard for the issues identified, and whether the policy is a proportionate means of achieving a legitimate aim. Any impacts identified are separated into direct impacts – which are directly attributable to the Warm Home Discount proposals; and indirect impacts – which occur not as a direct result of the proposals, but may be due to underlying population trends or existing differences between equalities groups.
7. Potential impacts for which there is insufficient evidence to draw a conclusion on are also identified. Where no impact is anticipated, this is noted as 'None identified'.

<sup>25</sup> Person A discriminates against person B if, because of a protected characteristic, A treats B less favourably than A treats or would treat others. If the protected characteristic is age, then A does not discriminate against B if A can show that A's actions are a proportionate means of achieving a legitimate aim.

<sup>26</sup> A person (A) discriminates against another (B) if A applies to B a provision, criterion or practice which is discriminatory in relation to a relevant protected characteristic of B's.

## Summary of Results

8. The findings of the assessment are summarised in matrix form in Table A11.1. Detailed findings for each of the components of the policy are described in Tables A11.2-A11.6 below. Overall, the assessment indicates that there are positive and negative impacts on some of the protective groups but that none of the aspects of the proposed policy discriminate against any of the groups under the Equality Act 2010.

### Policy Design

9. The impacts of the policy design on each of the equality groups are broadly similar in terms of eligibility for the broader group, legacy spend and industry initiatives, with positive impacts, and in some cases also negative impacts, in terms of age and disability.
10. The Core Group has both positive and negative impacts on age. There are significantly positive impacts for households that exceed the age threshold whereas households below the age threshold will not be eligible. This is judged to be a proportionate means of achieving a legitimate aim, as an estimated 52% of all fuel poor households are 60 years old and over.<sup>27</sup>
11. Impacts in the broader and legacy groups will depend on the way in which energy suppliers target households under this part of the policy. For the broader group it is assumed that the criteria used for the Cold Weather Payment<sup>28</sup> are used to identify households, as it has been suggested to suppliers that this may be good basis up on which to set their own eligibility criteria. For the legacy group, assuming that energy suppliers take a similar approach to targeting as under the current voluntary agreement then it is likely that low-income pensioner, family and long-term sick/disabled households are likely to benefit under the policy.

### Policy Delivery

12. The delivery of support to the broader and legacy groups are found to have some negative impacts (mainly associated with the difficulty that certain group will have in accessing the support available under the policy – i.e., reading correspondence and contacting their energy supplier) alongside positive impacts for age and disability groups (associated with fact that the partnership arrangements that are likely to be set up under the industry initiatives are likely to focus on certain groups of vulnerable households). No impacts have been identified on any of the other equality groups.

**Table A11.1: Summary of Equality Impact Assessment Findings**

Equality Duty	Eligibility for Core Group	Eligibility for Broader Group	Eligibility for Legacy Spend	Industry Initiatives	Methods of Policy Delivery	Ability of HHs to respond
Age	Positive + Negative	Positive	Positive	Positive	Positive	Negative
Race	Potential	No Impact	No Impact	No Impact	Positive + Negative	Negative
Disability	No Impact	Positive + Negative	Positive + Negative	Positive	Positive + Negative	Negative
Gender	Positive	No Impact	No Impact	No Impact	No Impact	No Impact
Transgender	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Sexual Orientation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Religion/Belief	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Marriage/Civil Part'ship	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Pregnancy/Maternity	Negative	No Impact	No Impact	No Impact	No Impact	No Impact

Positive	= Does not discriminate against group, and only has positive impacts on group
Positive + Negative	= Does not discriminate against group, has positive impacts for some within group and negative impacts for others
Negative	= Does not discriminate against group, but has negative impacts on the group
Potential	= Does not discriminate against group, has potential impacts on the group, but no evidence for them
Discriminates	= Discriminates against group under Equality Act 2010

<sup>27</sup> Fuel Poverty Statistics Report 2010, available at: [http://www.decc.gov.uk/en/content/cms/statistics/fuelpov\\_stats/fuelpov\\_stats.aspx](http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx)

<sup>28</sup> Details on eligibility for the Cold Weather Payment are available here: [http://www.direct.gov.uk/en/moneytaxandbenefits/benefitstaxcreditsandothersupport/inretirement/dg\\_10018668](http://www.direct.gov.uk/en/moneytaxandbenefits/benefitstaxcreditsandothersupport/inretirement/dg_10018668)

**Table A11.2: Policy Design – Eligibility for the Core Group**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
<b>Age</b>	Households <i>above</i> the age threshold for Core Group Support (i.e. threshold for Pension Credit Guarantee and Savings Credit)	<u>Direct impact</u> <ul style="list-style-type: none"> <li>Households in this group are able to receive support and benefit from a reduction in risk of fuel poverty</li> </ul>	None identified
	Households <i>below</i> the age threshold for Core Group Support	None identified	<u>Direct impact</u> <ul style="list-style-type: none"> <li>Households in this group do not have assistance to reduce the risk of fuel poverty</li> <li>Potential increase in risk of fuel poverty for households in this group as a result of increased energy bills as suppliers recoup the costs of providing support to eligible households.</li> </ul>
<b>Disability</b>	None identified	None identified	None identified
<b>Gender</b>	Females	<u>Indirect impact</u> <ul style="list-style-type: none"> <li>Receipt of Pension Credit does not depend on gender, but in the wider population and among claimants of Pension Credit there are more females than males over 65 due to differences in life expectancy and underlying population trends (see figures 11.2 and 11.3). This implies that women are more likely to receive support than men.</li> </ul>	None identified

<b>Race</b>	Households with an eligible member of white ethnic origin	<p><b><u>Potential Indirect impact</u></b></p> <ul style="list-style-type: none"> <li>Receipt of Pension Credit does not depend on race or ethnic origin, but in the wider population there is a greater concentration of white individuals over the age of 60, than in the under 60s age group (see Table A11.8). This does not necessarily mean that this translates into a disproportionate number of white individuals claiming Pension Credit (and therefore being eligible for support) as eligibility is based solely on income. However, it is possible that white households may be more likely to receive core group support than non-white households.</li> </ul>	None identified
	Households with an eligible member of non-white ethnic origin	None identified	<p><b><u>Potential Indirect impact</u></b></p> <p>There is a greater concentration of non-white individuals under the age of 60 compared to over 60 (see Table A11.8). This does not necessarily mean that this translates into a disproportionate number of non-white individuals being eligible for Pension Credit (and therefore being eligible for support), as eligibility is based solely on income. However, it is possible that non-white households may be less likely to receive core group support than white households.</p>
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	Households with members that are pregnant or are recent mothers	None identified	<p><b><u>Indirect impact</u></b></p> <ul style="list-style-type: none"> <li>This group is likely to be under-represented in the Core group of households as it is unlikely that many individuals receiving Pension Credit will be pregnant or recent mothers.</li> </ul>



**Table A11.3: Policy Design – Eligibility for the Broader Group**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
Age	Households in receipt of Income support, Income-based Jobseeker's Allowance, or Income-related Employment and Support Allowance, with a pensioner premium	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target Broader Group support at vulnerable and fuel poor households not covered by the Core Group, and therefore this group may benefit from a reduced risk of fuel poverty.</li> </ul>	None identified
	Households in receipt of Income support, Income-based Jobseeker's Allowance, or Income-related Employment and Support Allowance with a child under five	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target Broader Group support at vulnerable and fuel poor households not covered by the Core Group, and support households with young children, and therefore this group may benefit from a reduced risk of fuel poverty.</li> </ul>	None identified
Disability	Households in receipt of Income support, Income-based Jobseeker's Allowance, or Income-related Employment and Support Allowance, with a disability related premium or disabled child	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target vulnerable households, which include those that contain a member with a disability, and therefore these households may benefit from a reduction in the risk of fuel poverty.</li> </ul>	None identified
	Households in receipt of Child Tax Credit including a disability or severe disability element	<p><i>Indirect impact</i></p> <p>Suppliers are expected to target vulnerable households, which include those that contain a member with a disability, and therefore these households may benefit from a reduction in the risk of fuel poverty.</p>	None identified

	Households <i>not</i> in receipt of a disability related benefit	None identified	<u>Indirect impact</u> <ul style="list-style-type: none"> <li>Households in this group are unlikely to receive Broader Group assistance to reduce the risk of fuel poverty</li> <li>Potential increase in risk of fuel poverty for households in this group as a result of increased energy bills as suppliers recoup the costs of providing support to eligible households.</li> </ul>
<b>Gender</b>	None identified	None identified	None identified
<b>Race</b>	None identified	None identified	None identified
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	None identified	None identified	None identified

**Table A11.4: Policy Design – Eligibility for the Legacy Spend**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
Age	Low income households below Core Group eligibility age threshold	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target Legacy Spend support at households not covered by the Broader or Core Groups, and therefore this group below the Core Group eligibility age threshold may benefit from a reduced risk of fuel poverty.</li> </ul>	None identified
	Households with young children	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target Legacy Spend support at households not covered by the Broader or Core Groups, particularly households with young children, and therefore this group below the Core Group eligibility age threshold may benefit from a reduced risk of fuel poverty.</li> </ul>	None identified
Disability	Households in receipt of a disability related benefit	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Suppliers are expected to target Legacy Spend at vulnerable households, which include those that contain a member with a disability, and therefore these households may benefit from a reduction in the risk of fuel poverty.</li> </ul>	None identified
	Households <i>not</i> in receipt of a disability related benefit	None identified	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Households in this group are unlikely to receive support under Legacy Spend, and therefore may not receive assistance to reduce the risk of fuel poverty</li> <li>Potential increase in risk of fuel poverty for households in this group as a result of increased energy bills as suppliers recoup the costs of providing support to eligible households.</li> </ul>

	Households in receipt of a disability related benefit	<u>Indirect impact</u> <ul style="list-style-type: none"> <li>Suppliers are expected to target Legacy Spend at vulnerable households, which include those that contain a member with a long term illness, and therefore these households may benefit from a reduction in the risk of fuel poverty</li> </ul>	None identified
<b>Gender</b>	None identified	None identified	None identified
<b>Race</b>	None identified	None identified	None identified
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	None identified	None identified	None identified

**Table A11.5: Policy Design – Eligibility for Industry Initiatives**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
<b>Age</b>	Households associated with age-related charities who have not been identified as eligible under the Core Group or Broader Group	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Possible reduction in the likelihood of being fuel poor if household is referred for support under the Warm Home Discount scheme</li> </ul>	None identified
	Households associated with age-related charities more widely	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Possible reduction in the likelihood of being fuel poor if household is referred for support under the Warm Home Discount scheme</li> </ul>	None identified
<b>Disability</b>	Households associated with disability-related charities who have not been identified as eligible under the Core Group or Broader Group	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Possible reduction in the likelihood of being fuel poor if household is referred for support under the Warm Home Discount scheme</li> </ul>	None identified
	Households associated with disability-related charities more widely	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Possible reduction in the likelihood of being fuel poor if household is referred for support under the Warm Home Discount scheme</li> </ul>	None identified
<b>Gender</b>	None identified	None identified	None identified
<b>Race</b>	None identified	None identified	None identified
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	None identified	None identified	None identified

**Table A11.6: Policy Delivery – Methods of Policy Delivery**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
<b>Age</b>	Older households	<p><i>Direct impact</i></p> <ul style="list-style-type: none"> <li>Partnerships to support the Warm Home Discount scheme may lead to higher levels of engagement with eligible groups</li> </ul>	None identified
<b>Disability</b>	Visually/hearing impaired	<p><i>Direct impact</i></p> <ul style="list-style-type: none"> <li>Partnerships to support the Warm Home Discount scheme may lead to higher levels of engagement with eligible groups</li> </ul>	<p><i>Direct impact</i></p> <ul style="list-style-type: none"> <li>Individuals unable to read correspondence (or call a call centre) could be unable to claim a benefit</li> </ul>
<b>Gender</b>	None identified	None identified	None identified
<b>Race</b>	Household where English is not the main language	<p><i>Direct impact</i></p> <ul style="list-style-type: none"> <li>Partnerships to support the Warm Home Discount scheme may lead to higher levels of engagement with eligible groups</li> </ul>	<p><i>Indirect impact</i></p> <ul style="list-style-type: none"> <li>Individuals may not be able to read correspondence</li> </ul>
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	None identified	None identified	None identified

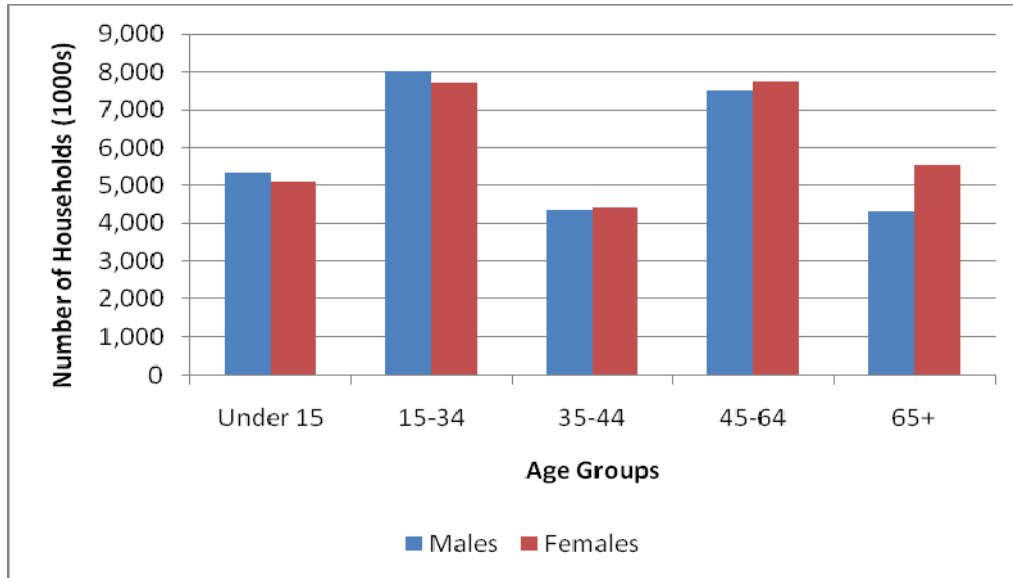
**Table A11.7: Policy Delivery – Household ability to respond to contact**

Protected Characteristic	Groups Affected	Positive Impacts	Negative Impacts
<b>Age</b>	Older groups	None identified	<i>Indirect impact</i> <ul style="list-style-type: none"> <li>• May be less able to respond to correspondence that is internet based, as prevalence of computers and internet access is expected to be lower among older age groups.</li> </ul>
<b>Disability</b>	Visually/hearing impaired	None identified	<i>Indirect impact</i> <ul style="list-style-type: none"> <li>• May be less able to respond to correspondence that is not tailored to the disability of the recipient</li> </ul>
<b>Gender</b>	None identified	None identified	None identified
<b>Race</b>	Household where English is not the main language	None identified	<i>Indirect impact</i> <ul style="list-style-type: none"> <li>• May be less able to respond to correspondence</li> </ul>
<b>Religion or Belief</b>	None identified	None identified	None identified
<b>Sexual Orientation</b>	None identified	None identified	None identified
<b>Gender Reassignment</b>	None identified	None identified	None identified
<b>Marriage and Civil Partnerships</b>	None identified	None identified	None identified
<b>Pregnancy and Maternity</b>	None identified	None identified	None identified

Supporting Evidence

1. This section details the evidence that supports the conclusions detailed in Tables A11.2 – A11.6.
2. Figure A11.2 shows the population distribution of households by age and gender for 2009, the latest year for which figures have been released by the Office for National Statistics. The figure shows that the population split between males and females are broadly similar until the over 65s category, where there are more females than males. This reflects the higher average life expectancy in females relative to males.

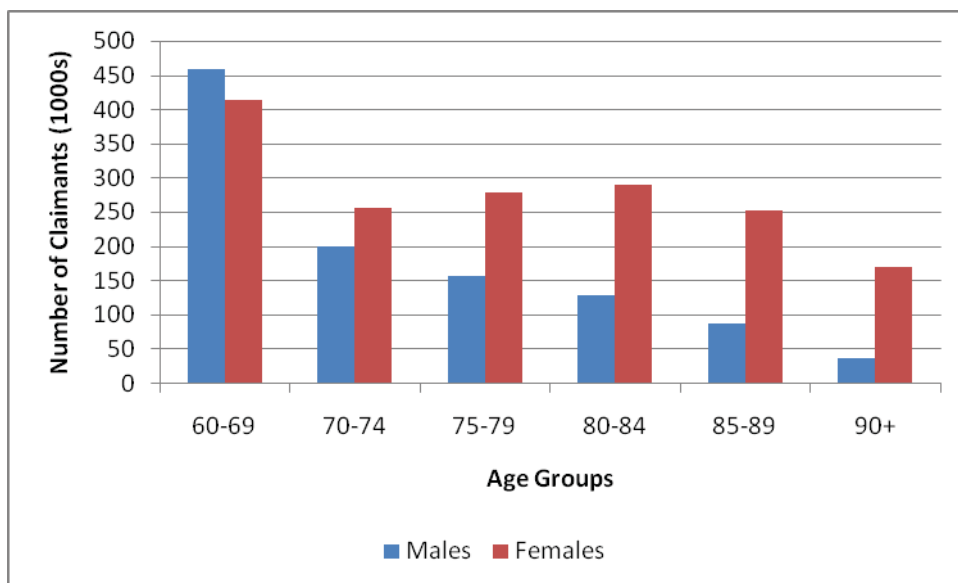
**Figure A11.2: Population Distribution of Great Britain by Age and Gender, 2009**



Source: Office for National Statistics

3. Figure A11.3 shows the distribution of claims in payment for Pension Credit by age and gender, as of February 2010. The figure shows that the number of females is higher than for males for the majority of age groups, particularly as the age groups approach 90+. Again this reflects the greater life expectancy of women relative to men.

**Figure A11.3: Distribution of Pension Credit Claimants by Age and Gender**



Source: Department for Work and Pensions. Figures are current number of claimants as of May 2010.



4. Table A11.8 shows the distribution of ethnic groups for the under 60s and over 60s age groups in England and Wales. The table indicates that non-white groups are under-represented in the over 60s group compared to those under the age of 60.

**Table A11.8: Proportion of population of England and Wales in under and over 60s age groups by ethnic group, mid-year 2007**

<b>Ethnic Group</b>	<b>White</b>	<b>Mixed</b>	<b>Asian</b>	<b>Black</b>	<b>Chinese &amp; Other</b>
Under 60	86.7%	2.0%	6.4%	3.1%	1.8%
60 +	96.1%	0.3%	2.1%	1.2%	0.4%

*Source: Office for National Statistics*

## Annex 12

### Changes Made Affecting the Net Present Value Relative To Consultation Stage Impact Assessment

1. A number of changes and updates have been reflected in this final Impact Assessment (IA) relative to the consultation stage IA<sup>29</sup> that affect the Net Present Value calculations of the two Policy Options assessed:

#### Eligibility Criteria for the Core Group

2. The eligibility criteria detailed at paragraph 92 of the consultation stage IA for Year 4 of the Warm Home Discount scheme (Policy Option 2) had incorrectly included a proposed age threshold of 75 for recipients of Guarantee and Savings Credit to be eligible for support under the Core Group. This has now been updated to align with the criteria set out in the Warm Home Discount consultation document<sup>30</sup> and Government consultation response, which specify that there will be no age threshold for recipients of Guarantee and Savings Credit in Year 4 of the scheme.
3. The result of this update is a larger Core Group and a reduced Broader Group in Year 4, which increases the overall equity weighted benefit of the scheme as a greater proportion of households supported through the Core Group are estimated to be in the lowest income deciles than those supported under the Broader Group. This change has a positive effect on the Net Present Value (NPV) of Policy Option 2.

#### Updated Estimates of the Size of the Core and Broader Groups throughout the Scheme

4. The estimated size of the Core Group over the four years of scheme in consultation stage IA were based on 2010 data on take up of the subsets of Pension Credit extracted from the Department for Work and Pensions (DWP) Tabulation Tool.<sup>31</sup> This final stage IA uses forecasts from DWP that provide more robust estimates of take up of Pension Credit over the lifetime of the scheme. These forecasts also reflect the changes to the award of Savings Credit announced in the 2010 Spend Review.<sup>32</sup>
5. The result of updating Core Group size estimates using the DWP forecasts relative to the consultation IA is:
  - a. Core Group: significantly larger in Year 1, and slightly smaller in Years 2 – 4
  - b. Broader Group: reduced size in Year 1, and slightly larger in Years 2 – 4.
6. Over the period of the scheme the use of the forecasts slightly increases the number households supported through the Core Group, and slightly reduces the number supported through the Broader Group. This increases the overall equity weighted benefit of the scheme by a small amount as a greater proportion of households supported through the Core Group are estimated to be in the lowest income deciles than those supported under the Broader Group. This change has a positive effect on the Net Present Value (NPV) of Policy Option 2.

#### The Level of Rebate Delivered to Households through the Core and Broader Groups in Year 1

7. The updated estimates of the size of the Core Group, outlined in paragraphs 4 – 6, imply an increase in the Core Group in Year 1 by over 100,000 households compared to the consultation IA. In order to accommodate these additional households within the Core Group in Year 1 of the scheme, the level of rebate delivered to the Core and Broader Groups in Year 1 has been adjusted from £130 to £120 for Year 1 only. This decision was taken to strike a balance between the level of assistance provided and the number of households supported through the Warm Home Discount scheme in Year 1. No adjustments have been made relating to the level of benefit specified for Years 2 – 4 in the consultation stage IA.

<sup>29</sup> Available at: <http://www.decc.gov.uk/assets/decc/Consultations/warm-home-discount/957-ia-warm-home-discount-scheme.pdf>

<sup>30</sup> Available at: <http://www.decc.gov.uk/assets/decc/Consultations/warm-home-discount/956-consultation-warm-home-discount.pdf>

<sup>31</sup> Available at: <http://83.244.183.180/100pc/tabtool.html>. The 2010 data were adjusted to reflect the impact of the rising state pension age in estimates of take up in later years of the scheme.

<sup>32</sup> Spend Review document available at: [http://cdn.hm-treasury.gov.uk/sr2010\\_complereport.pdf](http://cdn.hm-treasury.gov.uk/sr2010_complereport.pdf)

8. The increase in the size of the Core Group will have a positive effect on the NPV of the scheme as described in paragraph 6, however the reduction in the size of the benefit has a counteracting effect that outweighs this increase in terms of equity weighted benefits to eligible households. As a result, this change has a negative effect on the Net Present Value (NPV) of Policy Option 2.

#### **Updated Data Match and Sweep Up Success Rate Assumption**

9. The consultation stage IA assumed a combined success rate for the data match and sweep up exercise of 80%. This has been revised to 78% based on data testing following the Energy Rebate Scheme, and takes account of the decision for eligibility to be based on bill payer, rather than household.
10. This revision slightly decreases the estimated size of the Core Group and slightly increases the Broader Group in each year of the scheme. This reduces the overall equity weighted benefit of the scheme as a greater proportion of households supported through the Core Group are estimated to be in the lowest income deciles than those supported under the Broader Group. As a result, this change has a negative effect on the Net Present Value (NPV) of Policy Option 2.

#### **Updated Average Level of Support Under The Legacy Group for Policy Option 2 and All Support Under Policy Option 1**

11. The consultation stage IA assumed an average level of support per household of £112 under the Legacy Spend component of Policy Option 2, and all of Policy Option 1. This was based on the average level of support provided by participating suppliers to customers on social and discounted tariffs in the second year of the voluntary agreement.<sup>33</sup>
12. In response to feedback received during the Warm Home Discount consultation, the decision has been taken to permit one-off payments, in the form of rebates, to be counted against participating suppliers' Legacy Spend obligations throughout the scheme period. Rebates paid under the second year of the voluntary agreement averaged £28 per rebate, and were paid on over 540,000 customer accounts. The weighted average of support provided through social and discounted tariffs, and rebates, under the second year of the voluntary agreement was £84, which is now assumed as the estimated average level of support provided under the Legacy Spend group of the Warm Home Discount scheme. It is anticipated that support provided under Policy Option 1 will be similar in form to that under the Legacy Spend component of Policy Option 2. As such, the £84 assumption is applied to Policy Option 1 as well.
13. The result of this change is an increase in the estimated number of households assisted under both policy options, with each household assumed to receive a lower level of support than estimated in the consultation IA. The equity weighted reduction in the level of benefit outweighs the increase in the number of households receiving the support, and results in a negative effect on the Net Present Value of both Policy Option 1 and Policy Option 2.

#### **Updated Administrative Costs Relating to Verification of the Broader Group**

14. A mitigation action listed under Risk 4 above is to ensure a certain level of verification is undertaken to ensure that support under the Broader Group is targeted only at households at risk of fuel poverty. This process will:
- a. Require suppliers to obtain from potential recipients a declaration of their eligibility;
  - b. Require suppliers to inform potential recipients that they may be asked to provide further evidence of eligibility; and
  - c. Require suppliers to show that they have documentary evidence of eligibility for 5% of those that rebates were paid to.

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<sup>33</sup> For more detail see Ofgem – Monitoring Suppliers Social Spend, available at: <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Monitoring%20Suppliers%20Social%20Spend%202009-10.pdf&refer=Sustainability/SocAction/Suppliers/CSR>

15. The administrative costs of undertaking this process are now included in the administrative costs to business detailed in Table 11 above, and add around £9m to the estimate detailed in Table 11 of the consultation IA. This increase in costs has a negative effect on the NPV of Policy Option 2.

### **Flexibility Between Caps on Legacy Spending and Industry Initiatives**

194. The consultation stage IA detailed caps on the level of Legacy Spending and expenditure on Industry Initiatives. Following the Warm Home Discount consultation, rather than cap each component individually, a maximum cap for the combined spend of the two sections will be introduced, as set out in Table 6.1 above.
195. It is uncertain to what extent suppliers will use this flexibility, therefore for the purposes of the cost-benefit analysis in this IA we assume that, overall, suppliers allocate expenditure in a balanced way between Legacy Spend and Industry Initiatives below the maximum sub-caps for each component, as outlined in Table 6.2 above. This is broadly the same assumption as in the consultation IA.
196. The only effect of this change on the Net Present Value calculations is that it is assumed that £30m is spent on industry initiatives in Year 4 of the scheme, rather than the £20m assumed in the consultation IA. This reduces the spend on the Broader Group in Year 4, and as such reduces the equity weighted benefit for recipients of support under the Broader Group, the administrative cost of finding Broader Group households in Year 4, and the estimated change in energy demand, carbon emissions, and air quality. The net effect has a negative effect on the Net Present Value of Policy Option 2.

### **Income Distribution of Households Supported Through the Broader Group**

197. Energy suppliers will be required to direct expenditure under the Broader Group towards appropriate households which are in or are vulnerable to fuel poverty. Suppliers will be required to have any eligibility criteria used to identify households to support under the Broader Group approved by Ofgem. The Cold Weather Payment criteria have been identified as a set that could act as a guide for suppliers, and Ofgem will automatically approve eligibility criteria in line with this set.
198. It is uncertain which criteria suppliers will seek Ofgem to approve to find households to support under the Broader Group. However, as Ofgem will automatically approve the eligibility criteria used for Cold Weather Payments, we believe it is reasonable to assume that the income distribution of households eligible for Cold Weather Payments is an appropriate proxy for households under the Broader Group. Therefore, support provided under the Broader Group has been equity weighted in this IA using an income distribution of households estimated to represent that of households eligible for Cold Weather Payments. This distribution has a higher proportion of households in higher income deciles than assumed in the consultation stage IA. As a result, the equity weighted benefit for recipients of support under the Broader Group is lower in this IA than at consultation stage. This has a negative effect on the Net Present Value of Policy Option 2.