Title: Warm Home Discount Extension **IA No: DECC0172** **Lead department or agency:** Department for Energy and Climate Change **Other departments or agencies:** N/A	**Impact Assessment (IA)** **Date: 2nd October** **Stage: Consultation** **Source of intervention:** Domestic **Type of measure: Tax and spend** **Contact for enquiries**: warmhomediscount@decc.gsi.gov.uk

Summary: Intervention and Options

RPC Opinion: N/A

Cost of preferred option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANCB on 2009 prices)	**In scope of One-In, Two-Out?**	**Measure qualifies as**
£61m	N/A	N/A	N/A	N/A

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

Fuel Poverty is a long term, structural problem for households on a low income that face high energy costs.

Improving the energy efficiency of the housing stock is typically the best way of supporting the fuel poor, but this is a gradual process. Direct support on energy bills can help bring costs down in the meantime, while also helping offset the distributional impacts of rising energy prices and the costs of energy and climate change policies funded through energy bills. This latter effect is important given energy used to heat the home is a necessity and consequently rising energy prices can have a regressive impact on low income households.

The Warm Home Discount scheme began in April 2011 and provides assistance annually to around 2 million low income and vulnerable households in Great Britain. In the 2013 Spending Round, Government committed to the extension of the scheme by one year to 2015/16, and intervention is now necessary to set new scheme regulations.

What are the policy objectives and the intended effects?

The objective is to extend the current scheme for an additional year. This will ensure continued support to qualifying households and have the following intended effects:

1) reduce the depth of fuel poverty for a significant number of households by providing direct support on 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 current scheme regulations that provide support to households would cease after 2014/15;

Policy Option 1 – extend the Warm Home Discount to 2015/16, following the same obligation requirements as in 2014/15;

Policy Option 2 – extend the Warm Home Discount scheme to 2015/16 with minor amendments to the industry initiatives section of the scheme. This is the preferred option, as the changes proposed ensure that support is directed to groups particularly vulnerable to the negative impacts of fuel poverty, thereby improving the policy's ability to meet its aims.

Will the policy be reviewed? Yes **If applicable, set review date:** October 2016

Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	**Micro** No	**< 20** No	**Small** No	**Medium** No	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)			**Traded:** 0.09	**Non-traded:** 0.17	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister: ..... Date: 02/10/2014

Summary: Analysis & Evidence — Policy Option 1

Description: Extend the Warm Home Discount until 2015/16 as per current terms of the scheme.

FULL ECONOMIC ASSESSMENT

Price Base Year 2013	PV Base Year 2013	Time Period Years 1	Net Benefit (Present Value (PV)) (£m)		
			Low: 53	**High: 74**	**Best Estimate: 61**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	0	£452m	**£422m**
High	0		£475m	**£443m**
Best Estimate	0		£466m	**£435m**

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

- Equity-weighted value of bill increase as suppliers recoup the benefits paid: PV £358m – £359m. This includes any associated administrative costs to business estimated at PV £2m - £4m;
- Value of Change in fuel use : £51m - £60m
- Value of change in utility from reduced fuel consumption: PV £1.9m - £2.4m;
- Value of change in greenhouse gas emissions: PV £7m – 18m;
- Value of change in air quality: PV £2.5m – 3.2m;
- Administrative costs to Government: PV £1.6m.

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	0	0	£532m	**£497m**
High	0		£532m	**£497m**
Best Estimate	0		£532m	**£497m**

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

Equity-weighted value of transfer to recipient households: PV £293m;
Value of comfort taking: PV £204m.

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

- Reduction in number of households in fuel poverty and fuel poverty gap;
- Improvements in physical and mental health of recipient households as a result of reduction in bills and increased thermal comfort;
- The scheme requires obligated suppliers to spend £30 million on "Industry Initiatives". These Industry Initiatives are required to benefit the fuel poor. However there is flexibility for suppliers in terms of how they achieve this, therefore a full cost benefit analysis has not been carried out on this part of policy.

Key assumptions/sensitivities/risks — **Discount rate (%)** 3.5

- All administrative costs are passed on to all customers through the standing charge element of their energy bills;
- Recipients of support through bills increase their demand for heating fuels;
- The responsiveness of household energy demand to changes in energy bills are based on evidence from published non-Government sources – Beatty et al (2011), Jamasb and Meier (2010);
- The income distribution of recipients is based on data from the English Housing Survey (EHS) affecting the value of the transfer from bill-payers to eligible households.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: NA	**Benefits: NA**	**Net: NA**	NA	NA

Summary: Analysis & Evidence — Policy Option 2

Description: Extend the Warm Home Discount until 2015/16 introducing amendments Industry Initiatives.

FULL ECONOMIC ASSESSMENT

Price Base Year 2013	PV Base Year 2013	Time Period Years 1	Net Benefit (Present Value (PV)) (£m)		
			Low: 53	**High: 74**	**Best Estimate: 61**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	0	£452m	**£422m**
High	0		£475m	**£443m**
Best Estimate	0		£466m	**£435m**

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 £358 - £359m. This includes any associated administrative costs to business estimated at PV £2m - £4m.
- Value of Change in fuel use: £51m - £60m
- Value of change in utility from reduced fuel consumption: PV £1.9m – £2.4m;
- Value of change in greenhouse gas emissions: PV £7m - £18m;
- Value of change in air quality: PV £2.5m – 3.2m;
- Administrative costs to Government: PV £1.6m.

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

Cost of Industry Initiatives

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	0	£532m	**£497m**
High	0		£532m	**£497m**
Best Estimate	0		£532m	**£497m**

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

Equity-weighted value of transfer to recipient households: PV £293m;

Value of comfort taking: PV £204m.

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- The scheme requires obligated suppliers to spend £30 million on "Industry Initiatives". These Industry Initiatives are required to benefit the fuel poor however there is flexibility for suppliers in terms of how they achieve this.

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- All administrative costs are passed on to all customers through the standing charge element of their energy bills;
- Recipients of support through bills increase their demand for heating fuels;
- The responsiveness of household energy demand to changes in energy bills are based on evidence from a published non-Government source – Beatty et al (2011), Jamasb and Meier (2010);
- The income distribution of recipients is based on data from the English Housing Survey (EHS) affecting the value of the transfer from bill-payers to eligible households.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: NA	**Benefits: NA**	**Net: NA**	NA	NA

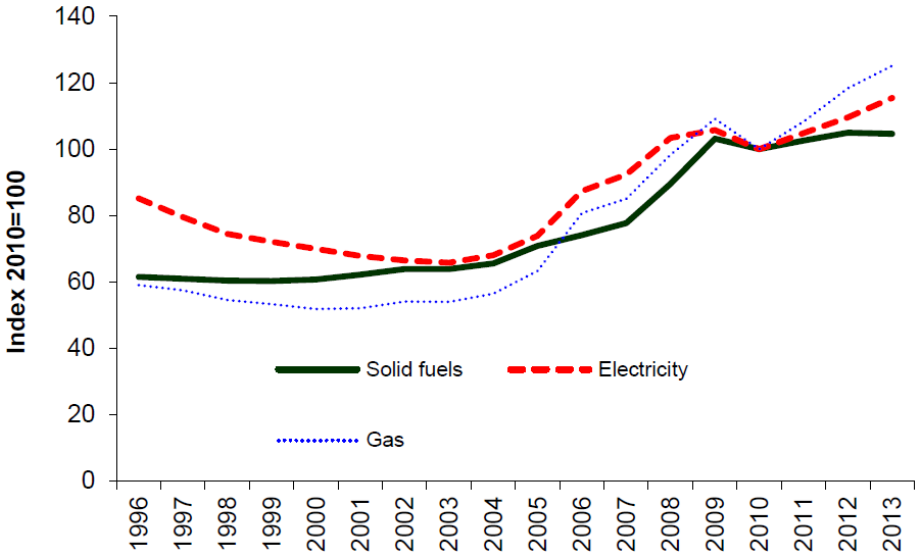
Contents

1. Evidence Base

1.1 Fuel poverty and distributional effects of energy expenditure for low income households

1. Domestic energy prices have been rising over the last 10 years (Figure 1). These rises have typically outstripped earnings growth in recent years, as well as general inflation levels to which many passport benefits are indexed[1].

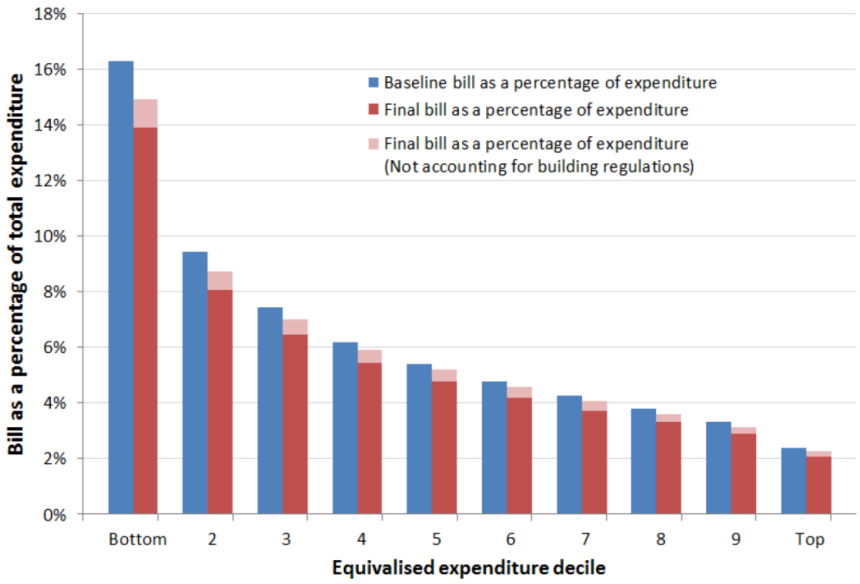
Figure 1: Fuel price indices in the domestic sector, 1996 - 2013



Source: Quarterly Energy Prices, June 2014[2]

2. The effects of rising energy prices are felt most by those with the lowest disposable incomes, for whom spending on energy necessities already accounts for a disproportionately high share of their annual outgoings (Figure 2).

Figure 2: Energy bill as a percentage of expenditure, with and without energy and climate change policies across expenditure decile groups



Source: DECC (2013)[3]

[1] IFS (2011). Available at: http://www.ifs.org.uk/comms/comm119.pdf

[2] Quarterly Energy Prices (DECC, 2014), available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322799/qep_June_2014.pdf

3. The households who are worst affected are those that face the overlapping problem of being on a low income and facing high energy costs, and as a consequence are in fuel poverty. Under the respective definitions of fuel poverty in England, Scotland and Wales, the headline levels of fuel poverty have improved in some of the most recent years after over half a decade of a worsening trend.[4] However, for those that remain in fuel poverty the depth or severity of their problem has grown in recent years – for example, in England fuel poor homes in the most inefficient G-rated housing have seen their average fuel poverty gap[5] increase from £1,406 in 2011 to £1,702 in 2012.

1.2 Incidence of Fuel Poverty

4. The recently published Fuel Poverty National Statistics report[6] shows that levels of fuel poverty in Great Britain (according to the respective definitions[7] in each constituent country) in 2012 were:
   - 2.28m households in England (around 10% of all English households), driving an aggregate fuel poverty gap of £1.01bn and an average fuel poverty gap of £443;
   - around 647,000 households in Scotland (approximately 27% of all Scottish households); and
   - around 386,000 households in Wales (approximately 30% of all Welsh households).
5. Energy prices are one of the key drivers of fuel poverty and have been steadily increasing in recent years, leading to the fuel costs for many households to rise.

1.3 Tackling Fuel Poverty and driving positive distributional outcomes

6. In order to tackle Fuel Poverty the Government has in place a range of policies across all three drivers of fuel poverty:
   - On **thermal efficiency**: the Affordable Warmth target of the Energy Company Obligation delivers heating and energy efficiency measures alongside other services to eligible households. This policy is estimated to cost around £365 million per year and in 2013 it supported around 290,000 low income and vulnerable households;
   - On **household income**: in 2014/15, the Winter Fuel Payment will provide pensioners with an additional £200 (£300 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;
   - On **energy prices**: the largest energy suppliers are obliged to deliver £1.1bn of direct assistance to low income and vulnerable households between 2011-14 through the Warm Home Discount scheme.
7. Although, the Government has committed further spending to extend the Warm Home Discount (WHD) scheme for a fifth year (to March 2016), the commitment is not yet set in regulations. The consultation document that accompanies this Impact Assessment sets out the Government's proposals.

1.4 The Warm Home Discount Scheme

8. The WHD scheme was introduced in April 2011, succeeding a previous Voluntary Agreement between Government and the largest energy suppliers to provide household level support to reduce energy costs.
9. The scheme currently provides help to around 2 million low income and vulnerable households annually in Great Britain. In 2012/13 Ofgem reported that around 1.5 million rebates of £130 including 1.16 million low-income pensioners, as well as a range of other support to vulnerable households[8].

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[3] DECC (2013). *Estimated impact of energy and climate change policies on energy prices and bills*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/172923/130326_-_Price_and_Bill_Impacts_Report_Final.pdf

[4] For more detail see DECC (2014), *Fuel Poverty Statistics Report*: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/319280/Fuel_Poverty_Report_Final.pdf; Scottish House Condition Survey (2012): http://www.scotland.gov.uk/Resource/0043/00439879.pdf; Welsh Assembly (2011/12): http://wales.gov.uk/docs/caecd/research/130430-wales-fuel-poverty-projection-tool-2011-12-report-en.pdf

[5] The fuel poverty gap in England refers to the energy costs that a fuel poor household faces above and beyond typical energy costs.

[6] See DECC (2013). *Fuel Poverty Statistics Report*: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/319280/Fuel_Poverty_Report_Final.pdf

[7] The Fuel Poverty definition in England is based on the Low Income High Cost (LIHC) measure. The LIHC measure was introduced after the Hills Review, see Hills, John (2012), Getting the measure of Fuel Poverty, Final Report of the Fuel Poverty Review, LSE, CASE report 72. The definition in Scotland and Wales is based on the 10% indicator, whereby a household is fuel poor if their energy costs exceed 10% of their income. Throughout this impact assessment, Fuel Poverty in England related to the LIHC definition and to the 10% indicator for Scotland and Wales.

[8] See Ofgem Warm Home Discount Annual Report 2012-13, Available at: https://www.ofgem.gov.uk/ofgem-publications/84111/finalwhdannualreportschemeyear2.pdf

10. WHD provides direct energy bill support for many fuel poor households but also reduces the bills of a large number of low income and vulnerable households[9]. This means that the policy both contributes to the Government's fuel poverty objectives and also helps to address broader distributional concerns across low income households as a consequence of energy price rises and the impact of energy and climate change policies funded through bills.

11. In the 2013 Spending Round[10] the Government committed to its continued support for the WHD with a budget of £320 million in 2015/16.

12. The WHD has an overall expenditure target for each financial year, which is divided into 3 main subgroups. The majority of spending each year is on automatic discounts made on the electricity bills of low income pensioners, those who are in receipt of a subset of Pension Credit; this is known as the '**Core Group**'.

13. The level of expenditure on the Core Group each year is determined by the number of qualifying households each year. The remainder is referred to as 'Non-Core' expenditure. Each year the Secretary of State for Energy and Climate Change sets a minimum level of expenditure that participating suppliers are required to undertake on a 'Broader Group' within the required overall spending level on Non-Core activities in that scheme year. The 'Non-Core' activities are broadly divided into two elements:

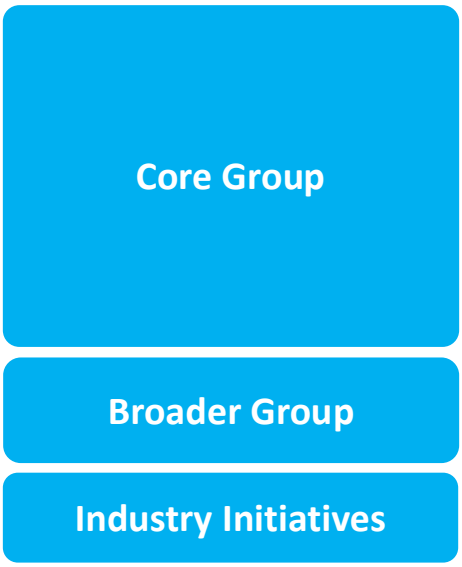

Figure 3: Composition of Warm Home Discount Spending Envelope

- The **'Broader Group'** – participating suppliers provide electricity bill discounts to a variety of low income and vulnerable households, including those of working age. Over the years of its operation, the scheme has been reducing expenditure in legacy schemes that were in place before the WHD was implemented (under the previous Voluntary Agreement) and increasing expenditure on support to households under the Broader Group. This now makes up the largest component of 'Non-Core' expenditure, with spending increasing from £3m in Year 1 to approximately £90m in Year 4.

- '**Industry Initiatives**' – participating suppliers are permitted to count up to a collective maximum of £30m of expenditure per year on actions to support households in fuel poverty or at risk of fuel poverty. These include activities such as the targeting of available support or offering energy saving advice.

14. 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 tackling fuel poverty. By the end of April 2014, approximately 330,000 measures were delivered to low income households through the ECO Affordable Warmth target.

15. However, upgrading the thermal efficiency of the housing stock is a gradual process and the Hills Fuel Poverty Review (2012) recognised the role of direct bill discounts in providing immediate support at scale in the short term[11].

1.5 Rationale for intervention

16. The extension of the WHD ensures continued support to vulnerable households against a background of rising energy prices over the past 10 years, with the impacts being felt particularly by fuel poor and low income households.

17. The rationale for providing support to vulnerable households via energy bills is founded in equity considerations and supported by the role that direct bill discounts can have as part of a cost-effective mix of interventions to tackle fuel poverty.[12] The equity rationale has two main components:

- Fuel Poverty: Direct bill support can reduce the depth of fuel poverty, remove some households from fuel poverty altogether, and improve the thermal comfort and health of assisted households, and;

- Distributional Equity: Rising energy prices disproportionately affect low income households because heating is a necessity good, therefore spending on heat, on average, makes up a larger proportion of low income

[9] For example in England many of these homes fall into the 'Low Income, Low Costs' category of households. For more information see DECC (2013) https://www.gov.uk/government/consultations/fuel-poverty-changing-the-framework-for-measurement

[10] HM Treasury, 2013, Spending Round 2013: documents: https://www.gov.uk/government/publications/spending-round-2013-documents

[11] Hills (2012). Getting the measure of Fuel Poverty, Final Report of the Fuel Poverty Review, LSE, CASE report 72, Chapter 7, 144-173

[12] For more detail see DECC (2013). Fuel Poverty: a Framework for Future Action: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf

households' expenditure than higher income households. Thus support for low income households to tackle rising energy prices is expected to have distributional benefits.

2. Policy Options

2.1 Options under consideration

18. Three options are under consideration:

- **Do Nothing**: under the current scheme regulations support to low income and vulnerable households would stop at the end of the 2014/15 scheme year when the current scheme regulations expire.

- **Policy Option 1**: extend the WHD, rolling forward the policy design of Year 4 of the current scheme, until 2015/16. This would enable many low income and vulnerable households to receive support at a time when energy prices continue to put pressure on the household budgets of those on low incomes and the fuel poor.

- **Policy Option 2**: extend the WHD until 2015/16 and make a number of small but important improvements to the Industry Initiatives element of the scheme. The scheme overall would take the form:
  1. **Core Group** – retain current eligibility and delivery mechanism;
  2. **Broader Group** - retain current eligibility and delivery mechanism;
  3. **Industry Initiatives**
     - approved Initiatives will be amended:
       - a cap on debt assistance will be introduced
       - suppliers will be encouraged to provide rebates to households living in Park Home who meet the Core or Broader Group criteria
       - suppliers will be encouraged to offer assistance to households that live off the gas grid
     - the remainder of Industry Initiatives spending would continue to be at the discretion of suppliers and monitored for compliance by Ofgem.

2.2 Analytical Approach

19. The approach taken to analyse the policy options builds on that developed for previous Impact Assessments of the WHD scheme[13]. Detail of the underlying approach and assumptions are set out in Annexes 1 – 4. We have not estimated any difference in the impacts of Policy Options 1 and 2. This is because the only difference between these policy options is regarding the guidelines in place for the Industry Initiatives, and it is not currently possible to quantify the impacts of any part of Industry Initiatives due to the flexibility in the rules surrounding it. The key assumptions in relation to the different Policy Options are described below:

2.2.1 Do Nothing Option

20. To estimate the 'Do Nothing' baseline we assume the following:

- When the current WHD scheme regulations come to an end in March 2015, and in the absence of new regulations, it is unlikely that energy suppliers would continue to provide continued support to currently eligible households.
- Therefore the value of the policy to society will be zero.

2.2.2 Policy Option 1

21. To estimate the impact of Policy Option 1 we assume the following:

- The overall expenditure on the scheme in 2015/16 will follow the same profile of spending rules as in scheme year 2014/15.
- Under this scenario participating suppliers are assumed to be required to provide support up to a combined total of £320m, offering a rebate of £140 to Core and Broader Group eligible households and spend up to £30m under Industry Initiatives.
- Each supplier incurs some administrative cost to process applications and payments for eligible households.

[13] DECC (2011), available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42595/1308-warm-home-disc-impact-assessment.pdf; DECC (2013), available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266020/warm_home_discount_ia.pdf

- Costs of the policy are added to the standing charge element of energy bills.
- We have assumed the distribution of recipients under the scheme mirrors the income distribution of the eligible population.
- Benefits under Industry Initiatives are included as non-monetised benefits.

2.2.3 Policy Option 2

22. The assumptions for Policy Option 2 in the NPV estimates are the same as those outlined for Policy Option 1.

3. Cost-benefit analysis

3.1 Methodology

23. This section assesses the costs and benefits of Policy Options 1 and 2, using the Do Nothing option as the counterfactual. A summary of the types of costs and benefits considered, both in monetary and non-monetary terms, is set out in Table 3.1 and the methodology for each is discussed below.

Table 3.1 – Summary of Costs and Benefits

	Benefits	Costs
Monetised	- Net equity weighted value of transfers *increase in income* *increase in comfort*	- Administrative Costs - Impact on energy consumption, greenhouse gas emissions and air quality - Industry Initiatives
Non-monetised	- Fuel Poverty Impacts - Health Impacts - Industry Initiatives	- Nil

3.1.1 Impact on Households

24. Under both options, the policy will be delivered by energy suppliers in proportion to their market share of domestic customer accounts[14]. Consequently, we expect that the cost of the policy will be passed onto domestic bill payers. This will have an impact on household disposable income and in turn influence household demand for energy from which a number of societal costs and benefits will stem. For the purposes of the analysis, we distinguish between two sets of households, *bill payers*, who incur the cost of the policy and *rebate recipients*, who benefit from the policy. We discuss the impact on each household type in turn.

Rebate Recipients

25. Rebate recipients are those households that meet Core or Broader Group eligibility criteria. However, the number of households that benefit in each group is based on a number of assumptions:

- Core Group: The size of the Core Group is determined using the latest Pension Credit forecasts as published by DWP for the year 2015/16 and the success rate[15] of data matching supplier records to DWP records. Households that meet the Core Group criteria automatically receive the rebate, which in turn determines the size of non-core spending. For 2015/16, we have estimated core expenditure as approximately £201m, based on 1.4m eligible households in the Core Group.
- Broader Group: Households eligible under the Broader Group do not receive the rebate automatically and suppliers are required to seek these households in order to provide them with assistance through the rebate. With expenditure on Industry Initiatives assumed to be at the maximum level of £30m, we estimate broader group expenditure of approximately £89m to support 635,000 households under both Policy Options 1 and 2.

  As households eligible under the Broader Group are part of the non-core obligation, we assume that the rebate is provided to them on a first come, first served basis. Suppliers can adopt some or all of the guided criteria for identifying the fuel poor.[16]

  In order to analyse the impact of the rebate on Broader Group households, we assume that energy suppliers only offer the rebate to households who fulfil one or all of the guided criteria described above (See Section 4.4.3 in Annex 4 for more detail behind this assumption).

  Potential proposals being considered to modify the broader group are discussed further in Annex 5.

[14] Ofgem calculate the market share of each supplier based on the number of domestic customer accounts suppliers holds on the 31st December of each operational year of the scheme.

[15] The success rate of the data matching process refers to a technical match rate and a sweep up rate. The technical match rate refers to the automatic data match (assumed to be 80%); the sweep up rate (assumed to be 25%) refers to the number of successful matches after responses received to DWP letters. For more details see Section 4.2.

[16] Details of the guided criteria can be found in: Ofgem (2013), *Warm Home Discount: Guidance for Licensed Electricity Suppliers and Licensed Gas Suppliers,* Section 4, 21-2.7 https://www.ofgem.gov.uk/ofgem-publications/58947/warm-home-discount-supplier-guidance-version-2-2013.pdf

Energy Demand

26. How households alter their behaviour in relation to energy use as a result of receiving a rebate (rebate recipients) or funding the WHD scheme (bill-payers) will determine energy demand responses.

27. We have assume that rebate recipients will spend 41% of their rebate on increased energy use to drive a higher level of thermal comfort in the home. This assumption is based on research for Winter Fuel Payments which has shown that labelled transfers (e.g. the label "*Winter Fuel* Payment") led to a higher proportion of the transfer being spent on fuel use, which is typically higher than the response from a non-labelled transfer.[17] As the rebate is delivered directly on the energy bill and is also labelled as "Warm Home Discount", we assume the rebate encourages consumers to recycle the rebate back in to energy consumption. We assume this response to be uniform across all recipient households.

Increase in income

28. The rebate can be seen as increasing household income of recipients, however we assume that at least part of the rebate will be used towards energy consumption (discussed above) and so only a portion of the rebate (about 59%) is counted as additional income. This monetary transfer (from bill payers to recipients) is adjusted to reflect that households in different income decile groups place a different value on this additional income gained. This adjustment is called 'equity weighting'.

29. 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 net equity value to society. Further information on the theory and method of using equity weights can be found in Annex 1.

Comfort

30. As a combination of drivers, low incomes have been shown to be correlated with lower temperatures within the home[18]. Support would be targeted under both Policy Options at a subset of low income and vulnerable households with the aim that those receiving assistance are able to increase the level of thermal comfort within the home. Hence, we would expect rebate recipients to increase their demand for energy.

31. The change in energy consumption of these households is valued using the retail price for the relevant fuel consumed – as this measures their willingness to pay for the additional comfort, in line with Interdepartmental Analyst Guidance[19]. Further detail is provided in Annex 3.2.1.

32. In line with the *Green Book* methodology the increase in comfort is also equity weighted to capture the different value that lower income households place on being able to spend on additional energy consumption to generate higher levels of comfort.

Bill Payers

33. All domestic Bill Payers[20] are expected to bear the cost of the policy as well as any administrative cost faced by energy suppliers in delivering the policy.

Energy Demand

34. We assume bill payers will make a small change in their energy consumption as a result of the costs of the scheme being passed on to their household energy bill. This change in consumption is determined through each household's income elasticity of demand for energy.

35. The income elasticities assumed for bill payers are informed by Jamasb and Meier (2010), who carried out a study into the determinants of energy expenditure in Great Britain.[21] The study provides income elasticity estimates for different income groups, which allows us to assign different elasticities to households in each income decile group considered in this impact assessment. Despite this variation across income deciles, energy demand for this group is assumed to be relatively income inelastic. This is likely to reflect the fact that relatively better off 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 is expected to be small relative to the size of their overall energy bill.

Income

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[17] Beatty, Blow, Crossley& O'Dea (2011). Cash by any other name? Evidence on Labelling from the UK Winter Fuel Payment, IFS Working Paper 11/10, available at: http://www.ifs.org.uk/wps/wp1110.pdf

[18] Hills(2011). Fuel Poverty: The problem and its measurement, CASE Report 69, Section 2.5, available at: http://eprints.lse.ac.uk/39270/1/CASEreport69%28lsero%29.pdf

[19] Green Book supplementary guidance: Valuation of energy use and greenhouse gas emissions for appraisal :https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

[20] It is worth noting that as result of the policy design, rebate recipients are also by default bill payers and therefore the costs of the policy also apply to them.

[21] Jamasb & Meier (2010), Household Energy Expenditure and Income Groups: Evidence from Great Britain, Cambridge Working Paper in Economics 1011. Available at: http://www.eprg.group.cam.ac.uk/wp-content/uploads/2014/01/JamasbMeierCombined-EPRG10031.pdf

36. We assume the policy will lead to an increase in the energy bills of bill payers; however, the extent to which this increase materialises will be impacted by any changes to energy consumption. For that reason, we only value the change in bills (cost of the policy) after adjusting for changes in household energy demand.

37. In line with *Green Book* methodology, we expect the magnitude of these changes (increases) in energy bills to be felt differently by households depending on where they are in terms of the income distribution. By applying equity weights to the overall change in bills, we are able to capture the impact on households across the income decile groups.

Reduction in utility from lower energy consumption

38. We also derive a social value from the change in energy demand of bill payers, using the retail price for the relevant fuel consumed. This social value reflects the change in utility of bill payers as a result of the policy.

3.1.2 Impact on resource cost, greenhouse gas emissions and air quality

39. Any increase in net energy consumption has three associated costs: the energy resource cost[22], the costs associated with additional greenhouse gas emissions and the impact on air quality.

40. The sensitivity of these results to elasticity and price assumptions, and information on the methodology used for estimating the impacts can be found in Annex 3.

3.1.3 Administration Costs

41. The delivery of support would result in some administrative costs for both Government and Energy Suppliers. Under both policy options, there would be an administrative cost associated with identifying eligible households, administering the payment of rebates, monitoring and enforcement.

42. Tables A4.2 and A4.3in Annex 4 provide an estimate of the administrative costs and burden of delivering the Policy on Government and energy suppliers. These cover the costs of monitoring and auditing (based on Ofgem estimates); data-matching (based on agreed contractual costs in previous years with DWP) and the administrative requirements that would be placed on energy suppliers in complying with the scheme e.g. verification costs.

43. Since the scheme began, we have received evidence regarding the delivery costs attached to the policy, which have been used to inform the estimates in this Impact Assessment. However, we acknowledge this is not sufficient as to be applied to the industry at large and we welcome any further evidence that can be provided on the costs of delivering the policy.

44. A detailed breakdown of how these costs were estimated can be found in Annex 4.

[22] The Energy Resource cost can be interpreted as the opportunity cost of the energy consumption valued using the long run variable cost of fuel. See Annex A3.2.2 for more details.

3.2 Results

45. Table 3.2 presents the Net Present Values of the Central Scenario of each Policy option:

Table 3.2 – Summary of discounted Costs and Benefits (£ millions)

		Policy Option 1	Policy Option 2
Benefits	Equity weighted value of rebate	293	293
	Increase in equity weighted comfort	204	204
	Total Benefit	**497**	**497**
Costs	Equity weighted value of bill increase	358	358
	Admin costs to Industry[23]	[3]	[3]
	Reduction in utility from lower energy consumption (bill-payers)	2	2
	Resource Costs	57	57
	Carbon Costs	13	13
	Air Quality	3	3
	Administrative Costs – Government	2	2
	Total Cost	**435**	**435**
	NPV	**61**	**61**

46. Both Policy Options have the same estimated NPV. This is because the only difference between these policy options is regarding the guidelines in place for the Industry Initiatives, and it is not currently possible to quantify the impacts of any part of Industry Initiatives due to the flexibility in the rules surrounding it. We discuss the qualitative impact of Industry Initiatives in section 3.3.3.

47. The individual results in Table 3.2 are driven by a number of different factors that impact the benefits and costs, which we explore in turn.

3.2.1 Equity Weighted Value of Transfers

48. The support provided under both options has a significantly positive equity weighted value to society. This is because the rebate transfers income from all bill payers to essentially those households on a lower income. The equity weights and the income distribution of the eligible population are described in Annex 1. As many households in the eligible population are concentrated in the lower income groups, we assume that the income distribution of the recipient household mirrors the distribution of households eligible for the rebate. This leads to a higher valuation of the rebate by its recipients after equity weighting.

49. However, as Table 3.2 demonstrates, the equity weighted value of the bill increase is also valued highly. This is because the cost of the scheme, which includes the rebate as well as any associated administrative costs (discussed below), is borne by all bill-payers including those in low-income households. The costs of delivering both options are the same.

3.2.2 Change in Equity Weighted Comfort

50. Under both Policy Options, the social value of increased comfort experienced by rebate recipients is high. This is the result of two effects. The first is due to the relatively more elastic response of rebate recipients than bill payers (as discussed in section 3.1.1) to changes in income. The second is due to the policy options targeting low income households, who value the change in comfort at a higher magnitude than high income households.

3.2.3 Reduction in Utility from Lower Energy Consumption

51. This represents the change in utility of bill payers as a result of the policy. In turn, this influences the overall increase in household energy bills and household energy consumption.

[23] We assume admin costs are paid for through bill increases so this cost is a subset of the value of bill increases

3.2.4 Resource Cost, GHG emissions and Air Quality

52. The net increase in energy demand that results in both Policy Option 1 and 2 leads to an increase in resource costs, GHG emissions and air quality.

53. However, under Option 2 further rebates may be offered to households in Park Homes. Assuming that their energy demand response will be the same as other recipients, this will add to resource costs, GHG emissions and changes in air quality. In this respect, these wider costs would represent an under-estimate.

3.2.5 Administration Costs

54. The administrative cost incurred by Suppliers in delivering the scheme is the same under both Policy Options.

55. There is no change in the costs to Government between the Policy Options presented. It is plausible that the additional auditing requirements of Industry Initiatives under Policy Option 2 may lead to cost estimates needing to be revised. However, we will return to this for the final Impact Assessment once more information on whether this is the case becomes available.

3.3 Non-Monetised Benefits

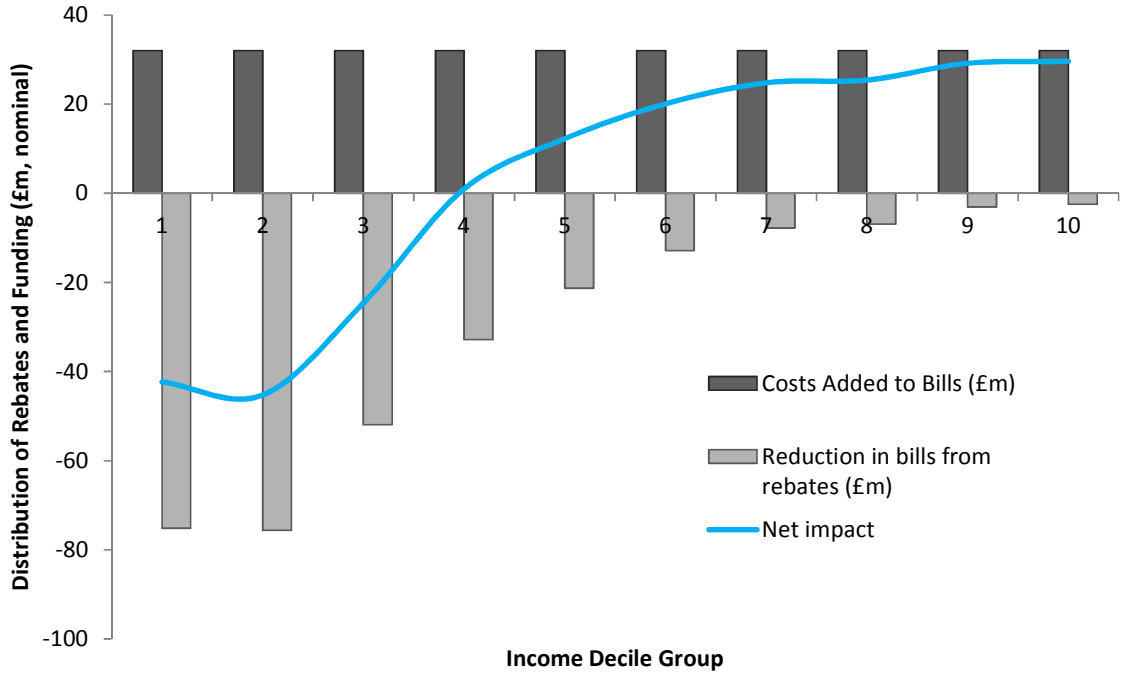
3.3.1 Distributional and Fuel Poverty Impacts

56. The two key aims of the WHD scheme are to alleviate fuel poverty and help offset the distributional impact of energy costs on lower income households. The distributional benefits of WHD are quantified and monetised as part of the cost benefit analysis using equity-weighting (see Annex 1). However, for clarity we also present a graphical illustration of the distribution of costs and bill reductions across income decile groups in this section. The fuel poverty impacts can be quantified but are non-monetised, and discussed in this section.

Distributional impact of WHD as a proportion of expenditure

57. WHD targets support based on eligibility criteria that reflect a household being on a low income, meaning that the policy drives positive distributional outcomes in terms of helping to offset general price increases as well as the contribution of energy and climate change policies to energy bills. The positive distributional impact of WHD is already captured in the Net Present Value calculations shown in Table 3.2 through the use of equity-weighting. However, this effect can also be demonstrated visually. The positive distributional effect of the Policy is shown in Figure 4, whereby costs are spread across all bill-payers, and the distribution of bill reductions (through WHD rebates) is heavily concentrated among lower income groups.

Figure 4: Distribution of scheme costs and bill reductions from WHD (nominal prices)



Fuel poverty impacts

58. As well as driving positive distributional incomes, the targeting of WHD at low income households is likely to also affect the breadth and/or depth of fuel poverty for those low income households who also face high energy costs. Fuel poverty is a devolved matter, and each GB constituent country has its own definition of fuel poverty, meaning it is not possible to conduct an overall assessment of the impact of WHD at the GB level.

59. Using the Fuel Poverty Impacts Projection Model[24], we estimate that the WHD will reduce the number of households in fuel poverty in England by around 40,000 households in 2015/16, while also driving a reduction in the aggregate fuel poverty gap for recipient households of around £28m (in 2011 prices), compared to the Do Nothing counterfactual scenario.

60. As the Low Income, High Costs definition of fuel poverty adopted in England is a relative measure, the aggregate fuel poverty gap is also affected by rebates being paid to low income households who are not in fuel poverty. As a result, the modelled 'high cost' threshold in 2015/16 falls as a result of the WHD reducing the fuel costs of low income households overall. This in turn leads to a potential increase in the fuel poverty gap for households not in receipt of a WHD rebate, worth up to £17m (in 2011 prices). This results in a modelled net impact of a reduction in the aggregate fuel poverty gap of around £11m (in 2011 prices). The impact of WHD on the median 'high cost' threshold is highly uncertain, however, and therefore these results should be treated with caution. We can, however, have confidence that the WHD reduces the extent and depth of fuel poverty in England.

61. Detail regarding the methodology for modelling the impacts on fuel poverty can be found in Annex 2. While not directly applicable for Scotland and Wales, we would expect to see a similar impact in terms of direction (i.e. a net reduction in fuel poverty outcomes), although the magnitude is uncertain.

3.3.2 Health Impact

62. The Interim Report of the Hills Fuel Poverty Review (2011) summaries the evidence base on the impacts on health as a result of living in lower temperatures. [25] As set out in Section 3.1.1, it is expected that a proportion of the rebates paid to eligible households will be used towards increasing the internal temperatures of homes. Therefore, the provision of support under both Policy Options 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.

63. The anticipated health benefits of support through energy bills are not monetised in this Impact Assessment as at present there is no robust methodology with which to quantify the health impacts of direct energy bill support.

3.3.3 Industry Initiatives Impact

64. Industry Initiatives are the third element of the Warm Home Discount Policy. The overall limit of spending on Industry Initiatives that can count towards suppliers' non-core obligations is capped at £30m under both Policy Options. In Year 2 of the Policy, suppliers collectively spent £21.9m on Industry Initiatives, benefiting a total of 98,739 customers and 3,862 trainees.

65. Whilst energy suppliers have flexibility in terms of how to allocate their spending, they are required to submit notifications to Ofgem outlining their Industry Initiative for approval.

66. A key difference between Policy Option 1 and 2 will be that suppliers will be encouraged to provide assistance through Industry Initiatives to fuel poor households in Park Homes and to households that live off-the-gas grid. For those in Park Homes, this assistance could take the form of a rebate as currently offered to core and broader group households. For fuel poor households living off-the-gas-grid, this assistance may take the form of an uplift to an existing rebate to help reduce costs, but could also take many other forms.

67. Overall, the number of households receiving bill support would increase under Policy Option 2. A more detailed discussion of the numbers of Park Homes and off-gas grid households we expect to benefit from Policy Option 2 are discussed in Annex 6 and 7 respectively.

68. Under Policy Option 1, we would expect the Policy Design of Industry Initiatives to follow that of Year 4, where suppliers spend on activities allowable under the WHD Regulations[26]. In Year 2, 70% of Industry Initiatives was

[24] For more detail on the modelling methodology see Section Four of the Analytical Annex to the Fuel Poverty Strategic Framework (DECC 2013), available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211137/fuel_poverty_strategic_framework_analytical_annex.pdf

[25] Hills(2011). Fuel Poverty: The problem and its measurement, CASE Report 69, Section 3, available at:
http://eprints.lse.ac.uk/39270/1/CASEreport69%28lsero%29.pdf

[26] Currently, the WHD Regulations outline six types of activity eligible under the scheme: energy debt assistance, energy efficiency advice, energy efficiency measures, benefit entitlement checks, referrals and energy efficiency training). Industry Initiatives do not have to focus on just one of the six types of activity specified in the WHD Regulations. Almost half (11 out of 24) of the approved initiatives in Year 2 of the Policy involved a combination of activities, most commonly energy advice combined with benefit entitlement checks and referrals for rebates or energy measures.

spent on debt assistance, 11% on multi-activity initiatives, 10% on energy efficiency measures, 5% on energy advice, 3% on training and 1% on benefit entitlement checks.[27]

69. Whilst we include the cost of Industry Initiatives in the cost of the policy, we have not monetised the benefits associated with Industry Initiatives in this Impact Assessment. This is because at present there is no robust methodology with which the benefits of each industry initiative accruing to its recipients can be quantified.

3.4 Summary

70. As discussed, overall it is estimated that both Policy Options have the same NPV. However, additional assistance provided to fuel poor households in Park Homes and off-gas grid households under Industry Initiatives would further impact the NPV value of Policy Option 2.

71. The magnitude of the impact would depend on the social value placed on current initiatives provided to beneficiaries against the provision of additional rebates.

72. As a result of the potential implications on the NPV, Policy Option 2 is our preferred Option.

[27] Ofgem, Warm Home Discount Annual Report – Scheme Year 2 https://www.ofgem.gov.uk/ofgem-publications/84111/finalwhdannualreportschemeyear2.pdf

4. Risks and Sensitivities

73. The costs and benefits of support through energy bills have been estimated using 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.

4.1 Delivery Risks

4.1.1 Risk: Large increase in take-up of eligible benefit

74. As outlined in previous impact assessment, the size of the eligible Core Group is estimated using up to date Department for Work and Pensions (DWP) forecasts of the Pension Credit caseload.[28]

75. These forecasts are based on assumptions[29] around the take up of Pension Credit, as not all those that are eligible claim the benefit. Should these assumptions breakdown and take-up increases[30], there is a risk that Core Group expenditure rises above the total level of the obligation.

76. 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.

4.1.2 Risk: Forecasting error

77. As explained earlier, the size of the core group is based on DWP forecasts of the Pension Credit caseload, which can be has been susceptible to forecasting errors and lead to risk of possible under-/over-spend of the core-group obligation.

78. This risk is minimised through new forecasting methodologies adopted by DWP in which the forecasting team take an actual cut of the real Pension Credit data and remove non-eligible cases they can identify at an early stage, and adjust for expected mortality.

79. The risk is further minimised as forecasts are compared using a "top-down" forecasting approach, whereby aggregated benefits-data are used in forecasting models to provide another estimate of the Core Group size.

80. These two approaches are used to generate a robust range on which to base the level of non-core spending targets in the lead up to the scheme year.

4.2 Sensitivities of key assumptions

81. We recognise there is uncertainty in the analysis carried out for this impact assessment. We have therefore carried out a sensitivity analysis on the following key assumptions:

    - Administration costs
    - Energy Demand Response
    - Energy Prices

82. Figure 5 shows the results of changing the assumptions on the NPV of Option 2 and Table 4.1 shows the variation in the assumptions used in this analysis.

[28] Department for Work and Pensions, 2014, Outturn and forecast: Budget 2014: https://www.gov.uk/government/publications/benefit-expenditure-and-caseload-tables-2014

[29] 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.

[30] The result of incentives to become eligible for Warm Home Discount and other benefit

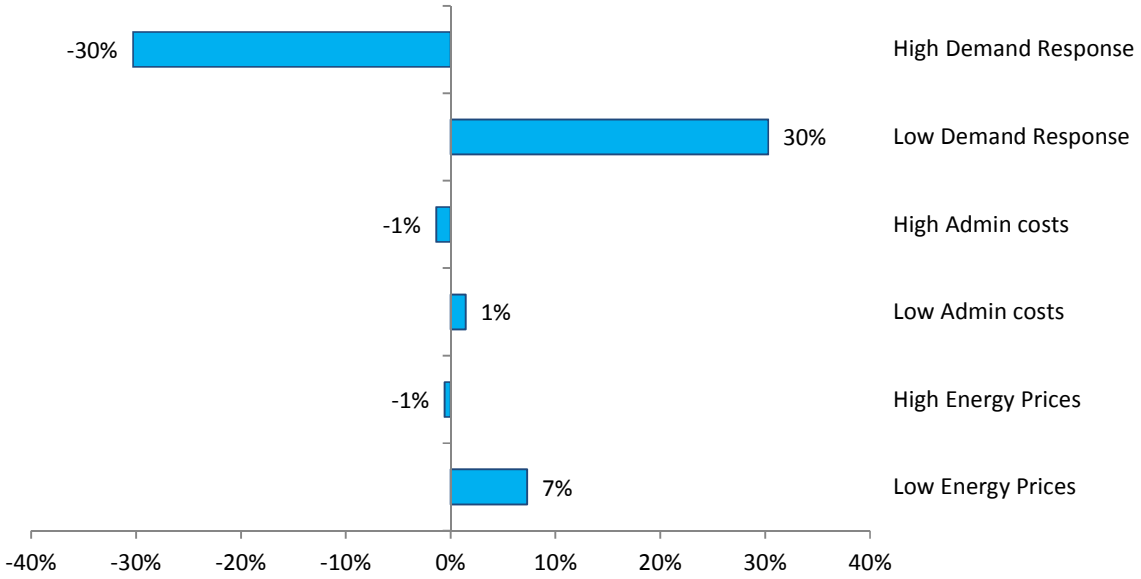


Figure 5 : Graph demonstrating the percentage change in NPV from changing assumptions in the analysis

TABLE 4.1 – Sensitivity of NPV to assumptions

Assumptions	Scenario	Description of scenario	Actual change in NPV
Demand Response	*High*	*25% increase*	-£19m
	Low	*25% decrease*	+£19m
Admin Costs	*High*	*25% increase*	-£1m
	Low	*25% decrease*	+£1m
Energy Prices	*High*	*IAG high energy price projection*	-£0.3m
	Low	*IAG low energy price projection*	+£4m

83. In order to measure the sensitivity, all other aspects of the policy have been kept constant so that it is possible to isolate the impact of a change in each assumption on the NPV.

84. Table 4.1 and Figure 5 demonstrate that the NPV is very sensitive to assumptions around the demand response and less sensitive to assumptions around energy prices and admin costs. The NPV is sensitive around the energy demand response as this determines how much households receiving the rebate achieve increased comfort from the rebate and this makes up the largest impact of this policy.

85. Energy prices affect the NPV in two ways. First retail prices are used to calculate the value of the increase in comfort of rebate recipients and the fall in utility of all domestic bill payers, (see section A3.2.1 for more information). Second, long run variable prices are used to calculate the resource cost. The policy is fairly insensitive to changes in energy prices given the projected range in energy prices over 2015/2016 is fairly small.

86. The admin costs are expected to be added on to the energy bills of all bill payers, which impacts the demand response of bill payers and subsequently has an impact on air quality and value of carbon emissions. The change in admin costs from high to low has a small impact on the NPV given the total administration costs make up a small proportion of the overall costs.

87. To note, the NPV remains positive despite changing any of these assumptions, with benefits of the policy option consistently outweighing the cost.

5. Wider Impacts

88. Since the publication of the first impact assessment of the policy 2011, the following impacts have changed:

- Greenhouse Gas emissions

  We estimate greenhouse gas emissions to be higher than previously estimates. This is due to a change in methodology in relation to the estimated demand response from rebate recipients, which we assume is higher than previously anticipated.

  Table 5.1 below provides estimates of the increase in emissions.

Table 5.1 - Estimated increase in emissions of greenhouse gases (Mt CO_2e)

Sector	Policy Option 1	Policy Option 2
Traded	0.09	0.09
Non-traded	0.17	0.17

For greater detail on the methodology and income elasticities used to estimate the changes in energy use following assistance, see Annex 3.

89. We do not believe the following impacts to have changed since the first impact assessment of the policy in 2011.[1]

- Statutory equality duties
- Economic impacts
  - Impact on competition
  - Impact on small businesses
- Social impacts
  - Health and well-being
  - Human rights
  - Justice system
  - Rural proofing
- Sustainable development
- Environmental impacts
  - Wider environmental issues

[1] See Impact Assessment of the Warm Home Discount Scheme (2011); Warm Home Discount: proposals to introduce greater flexibility – Impact Assessment (IA) (2013)

Annex 1 - Valuing the distributional impact of Warm Home Discount

1. In order to estimate the distributional impact of WHD it is necessary to understand and estimate where the relevant costs and benefits fall across households and the wider income distribution. In relation to funding the scheme, it is expected that energy suppliers will pass on the costs of the obligation to their customer base. There are many ways in which they could potentially spread these costs across both their domestic and industrial consumers. For the purposes of this Impact Assessment, and in line the approach taken for other recent domestic supplier obligations[2], we assume suppliers will pass costs on in the way in which they face them. As a result, it is assumed that suppliers pass all the costs of the obligation as an equal and fixed lump sum per domestic customer account. This is a result of the share of the WHD being allocated to each participating suppler on the basis of the number of domestic customers they have. This in turn means that a supplier's marginal cost of participating in the scheme is determined by the number of customers they have, and they therefore incur costs on a 'per customer' basis.
2. The funds raised from all energy consumers are then assumed to be transferred to eligible households in the form of rebates. It is possible to estimate how the rebates and associated benefits fall across the income distribution using national survey data to assess the income levels of households in receipt of passport benefits that make them eligible for either the Core or Broader Groups. More detail is provided in Section A1.2 below.
3. 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 WHD-qualifying 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.

A1.1 Equity weighting

4. In line with the *Green Book*[3], we apply equity-weights to our cost-benefit analysis to value the distributional impact of the main policy options.
5. Equity weighting accounts for the difference in value that a household in a lower income group places on £1 compared to a household in a higher income group.
6. The equity weights used are contained in the following table, and are based on the latest income data from the Fuel Poverty Analytical Dataset, 2011 (which itself is based on the 2011 English Housing Survey).

Table A1.1 – Equity Weights

Decile	1	2	3	4	5	6	7	8	9	10
Equity Weight	2.8	2.0	1.6	1.3	1.1	0.9	0.8	0.6	0.5	0.4

7. Using the equity weights, an additional £1 for *any* household in the lowest income decile would be valued at £2.8, whereas an additional £1 to *any* household in the highest income decile would be valued at £0.4.
8. 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.

A1.2 Income Distribution of eligible and non-eligible households

9. Using the 2011 Fuel Poverty Analytical Dataset, we are able to understand the distribution of the eligible population across different income decile groups. For the Core Group, where eligibility is tightly defined, we are able to estimate where households in receipt of Pension Credit are in the income distribution with a relatively high level of confidence. For the Broader Group, we do not have perfect information because:
   a. suppliers are able to select their own eligibility criteria (subject to approval by Ofgem);
   b. as because non-Core spending is capped, not everyone who is eligible will necessarily be in receipt of a rebate, generating uncertainty around where the actual recipients are in the income distribution;
10. To estimate where Broader Group households sit in the income distribution, we assume that the eligibility criteria used by suppliers are consistent with the benefits that make homes eligible for Cold Weather Payments (CWP)[4].

[2] For example, see the Annex H of the final stage Green Deal and ECO Impact Assessment. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42984/5533-final-stage-impact-assessment-for-the-green-deal-a.pdf

[3] HM Treasury (2003). *The Green Book*. Available at: https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

This is because under the current WHD scheme, if suppliers were to select CWP-based eligibility criteria then Ofgem would automatically be required to approve them and suppliers have historically made CWP central to their Broader Group criteria. We use these proportions as probabilities of the number of households in each income decile group. Table A1.2 provides a breakdown of the proportion of households distributed across the different income decile groups according to the eligibility group they fall into.

Table A1.2 – Income Distribution of Groups

Income Decile Group	Core Group	Broader Group
1 - Poorest	30%	17%
2	27%	25%
3	19%	16%
4	10%	14%
5	6%	12%
6	3%	7%
7	2%	4%
8	2%	2%
9	1%	2%
10 - Richest	1%	0%

[4] For a list of qualifying criteria see https://www.gov.uk/cold-weather-payment/eligibility

Annex 2 – Approach to estimating fuel poverty impacts

1. The fuel poverty impacts estimated in this Impact Assessment using DECC's Fuel Poverty Impacts Projection Model for England.[1] This is a micro-simulation model, that for the purposes of this Impact Assessment has followed the following structure:
    a. use the 2011 English Housing Survey as a base data set;
    b. estimate a 'Do Nothing' baseline by:
        i. simulating the installation of energy efficiency and renewable energy installations in English homes between 2011 and 2015;
        ii. simulate the change in energy prices faced by all English households using projections for 2011 – 2015 (using the prices drawn on for the latest published DECC Prices and Bills report[2]). These prices reflect the estimated costs of funding WHD, therefore for the 'Do Nothing' baseline we remove these costs;
        iii. simulate changes in household income levels by applying earnings growth rates and GDP forecasts for the period 2011 to 2015 (using the most recent Office for Budget Responsibility projections[3]).
    c. estimate fuel poverty levels under the preferred policy option by simulating – on top of the baseline above – the impact of distributing WHD rebates to households that are in receipt of qualifying benefits as recorded in the 2011 EHS; as well as adding the estimated cost of WHD on to the bills of all domestic gas and electricity customers.
2. The micro-simulation approach allows us to 'track' households that are in receipt of WHD support, which enables us to see what the impact of the policy is *on those who are targeted with support* as well as those who are not.

[1] For a detailed description of the methodology please see Section Four of the July 2013 Fuel Poverty Strategic Framework, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211137/fuel_poverty_strategic_framework_analytical_annex.pdf

[2] DECC (2013). *Estimated impact of energy and climate change policies on energy prices and bills*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/172923/130326_-_Price_and_Bill_Impacts_Report_Final.pdf

[3] OBR (2014). *Economic and Fiscal Outlook*. Available at: http://budgetresponsibility.org.uk/economic-fiscal-outlook-march-2014

Annex 3 - Response to energy demand

A3.1 Energy Demand

1. WHD rebates will be delivered through reductions in electricity bills. This is effectively an increase in household disposable income for rebate recipients and a decrease in household disposable income for bill payers who bear the cost of funding the rebates. As a result we would expect households to respond through observable changes in the amount of energy they consume.
2. The responsiveness of energy demand to a change in energy costs or income depends on household characteristics and the way in which costs fall on households.

Rebate Recipients

3. In the case of the WHD it is assumed there is a labelling effect, which means households receiving the rebate will spend a significant proportion (estimated at around 41%) of the bill reduction on energy. This is based on evidence from the response of Winter Fuel Payment recipients[38]. As such the modelling assumes that 41% of the rebate is used for energy consumption.

Bill-Payers

4. We expect bill-payers who bear the overall cost of the policy to respond by reducing their energy consumption by a small amount.
5. For the purposes of this Impact Assessment, we model the responsiveness of households using income elasticities of expenditure for different fuel types from Jasamb & Meier (2010)[39] for different income brackets, mapped onto income decile groups. The values are shown in table A3.1 and can be interpreted as the percentage change in expenditure on gas and electricity in relation to a 1 per cent change in the income of the household. For example, a 1 per cent reduction in income would on average lead to a 0.033 per cent reduction in gas expenditure in income decile group 1.

Table A3.1 - Income Elasticities - Jamasb & Meier (Expenditures)

Income Decile Group	Electricity	Gas	All Energy
All	0.062	0.064	0.058
1 - Poorest	0.046	0.033	0.053
2	0.050	0.051	0.050
3	0.050	0.051	0.050
4	0.050	0.051	0.050
5	0.050	0.051	0.050
6	0.076	0.096	0.061
7	0.076	0.096	0.061
8	0.152	0.168	0.142
9	0.152	0.168	0.142
10 - Richest	0.098	0.087	0.080

6. We expect this change in demand for energy from both rebate recipients and bill payers to lead to social costs and benefits in terms of “Comfort Taking”, change in additional GHG emissions and resulting impact on air quality, which are described in the following section.

A3.2 Costs and Benefits resulting from changes in energy demand

A3.2.1 Comfort Taking

7. Comfort taking here refers to the value of the change in indoor temperatures that result from receiving a WHD rebate.

[38] Beatty, T., Blow, L., Crossley, T. & O’Dea, C. (2011). Cash by any other name? Evidence on labelling from the UK Winter Fuel Payment. Available at: http://www.ifs.org.uk/publications/5603

[39] *Source: Jamasb & Meier (2010)*

8. We expect rebate recipients to experience increased levels of warmth as the rebate incentivises them to increase energy consumption, which we assume is through the use of heating fuels.
9. To capture comfort taking within our cost-benefit analysis, we derive a social value of changes from changes in energy consumption using the retail price for the relevant fuel consumed, in line with IAG guidance, as this reflects a household's willingness to pay for additional warmth.
10. A social value is derived from those in the eligible group increasing their energy consumption, primarily through increased levels of warmth. The increase in energy consumption of these groups is valued using the following formula:

$$Social\ Value\ of\ Comfort = retail\ price_f * \Delta\ energy\ consumption_f$$

Where f = gas, electricity, oil, coal

11. For non-eligible bill-payers, we anticipate that as a result of slightly higher bills (expected to be around £13 per household) there will be a reduction in energy consumption – some of which could be through a small reduction in the use of heating fuels. As a result, we value this reduction in the same way as comfort taking.

A3.2.2 Energy Use (Resource) Cost

12. The changes in energy consumption described above would also have an impact on society, by either using up resources that could be employed in alternative ways (if energy use increases) or freeing up resources to be used elsewhere (if energy use decreases).
13. The cost of changes in energy consumption and the benefits of reduced use are valued at the variable domestic price for the relevant fuel in 2015, as published in the DECC Interdepartmental Analysts Group guidance on valuing energy use and greenhouse gas emissions.

$$Resource\ Cost = Long\ Run\ Variable\ Cost_f * \Delta\ energy\ consumption_f$$

Where f = gas, electricity, oil, coal

A3.3.3 Air Quality and Greenhouse Gas (GHG) Emission Valuation

14. With the resulting changes in energy demand, we expect there to be an overall aggregate increase in energy consumption as the increased energy consumption of rebate recipients outweighs the reduction in demand from bill-payers (as a result of varying income elasticities).
15. Changes in energy consumption as a result of the policy would lead to changes in greenhouse gas emission levels, which have a detrimental impact on society.
16. Changes in the level of emissions would have social impacts, which are valued by using a combination of market and 'shadow' prices. Emissions have two valuation-relevant elements; air quality and GHG cost of those emissions (traded and non-traded).

Annex 4 – Estimating the administrative burden

1. The Government has decided to deliver the WHD scheme through energy suppliers. We expect energy suppliers will face some on-going administration costs in order to deliver the policy. The Government will also bear some of the costs of delivering the rebate, especially with respect to data matching activities for Core Group rebates.

2. We expect any additional costs of delivering the policy is assumed to be in addition to the obligation and we assume suppliers will seek to recoup delivery costs through energy bills, implying a small increase to the energy bills of all households.

A4.1 Costs to Government

3. The costs to Government are based on actual estimates from previous years, and assumed to continue at these levels to 2015/16. These include:

   - Ofgem's role in administering the WHD scheme and monitoring suppliers' compliance with their WHD obligations.
   - DWP's role in providing data matching assistance for households in the Core Group, informing matched and un-matched households through letters regarding their eligibility to receive the rebate and call centre costs for enquires around the policy.
   - An independent 3rd party to fulfil the role in providing a reconciliation service to energy suppliers for Core Group rebates. This service rebalances the costs of Core Group so that they are in proportion to each supplier's market share, while still enabling each supplier to pay all their eligible Core Group customers a rebate.

4. We expect these administrative costs to vary, but mainly with regard to DWP letters and call centre service and to the extent that Ofgem's role could increase under Policy Option 2, the costs below may be an underestimate.

Table A4.1 – Administration Costs to Government (£'000s, 2014 prices)	
Ofgem	728
DWP	910 - 980
Core Group Reconciliation	24
Total	**1,660 - 1,730**

A4.2 Costs to Industry

5. To date, evidence available to Government on the costs to energy companies of delivering the WHD has been limited. Additional information would be welcome as part of this consultation. In the absence of more specific evidence, we have drawn from the industry-informed administrative costs used for the recent Government Electricity Rebate (GER) consultation.[40] While different in nature, because both policies require energy suppliers to deliver electricity bill rebates, it is anticipated that GER-based costs are applicable to the WHD.

   Overview of tasks

6. We have estimated that suppliers will be faced with costs in 3 broad categories: Processing, Verification and Set-up costs. These tasks are broken down further below.

A4.2.1 Limitations

7. There are limitations concerning the data used in the GER, which we re-iterate. For the purposes of the GER rebate many suppliers were asked to provide broad estimates of the cost of specific delivery tasks and many of the responses received highlighted the uncertainty surrounding their estimates. Moreover, there was wide variation in suppliers' estimates of the cost of undertaking the same delivery task. While this may represent differences in the efficiency with which suppliers are able to deliver the rebates, it could also suggest suppliers have interpreted the scope of a particular task rather differently, meaning estimates should be treated with caution.

[40] Available online at: https://www.gov.uk/government/consultations/government-electricity-rebate

A4.2.2 Processing

8. In terms of processing costs, we estimate costs of processing applications, where we assume energy suppliers will face:

   - staffing costs (to process applications for Broader Group and process payments for both Broader Group and Core Group);
   - delivery costs in providing the payment to each household

   Staffing

9. In line with methodology in the Government Electricity Rebate Impact Assessment, where information was not available from suppliers to help in estimating the cost of a particular task, we have made assumptions regarding the amount of staff time that would be spent at relevant grades in the completion of that task.

10. We have used the hourly wage costs set out in Table A4.2 below. These values are based on wage rates in the Annual Survey of Hours and Earnings (ASHE)[41], inflated by 30% to account for overheads in the line with Standard Costs Model approach and adjusted in line with observed wage growth since the ASHE publication.

Table A4.2 – Staffing Assumptions

Task	Grade	Time (hours)	Assumed hourly wage cost
Reading Regulations	Administrator	4 – 14	£13.26
	Director	2 – 7	£70.99
Processing Payment	Applications (Data Entry)	130,000 - 216,000	£13.26
	IT support	94 - 281	£17.64
	Finance administrator	7 – 36	£14.08
	Senior Financial Officer	4 - 14	£37.50

Delivering payment to each customer

11. There is evidence from the GER that indicates supplier face different costs for delivering the rebate to credit customers and to pre-payment meter (PPM) customers.

12. The cost of delivering the rebate to credit customers is expected to stem from: updating IT systems to enable the rebate to be issued automatically to these customers' accounts; and manual processing for those customers where automatic processing fails. Based on information submitted by suppliers, we estimate the cost of automatic processing for Options 1 and 2 at around £0.03 per eligible customer in each year. Suppliers expect manual processing to be more costly per customer for whom it is required. Expressed as an average of all eligible customers it is estimated also at £0.03 in each year.

13. For PPM customers, suppliers have different options for delivering the rebate. The two mechanisms most likely to be utilised are a voucher that could be redeemed from a vendor, usually a news agents or a Post Office; and Special Action Message (SPAMs). Based on information submitted by suppliers, we estimate the cost the voucher delivery route at around £1.07 per customer; and the cost of SPAMs at around £0.03 per customer. There is a large degree of uncertainty around these estimates due to the variation in suppliers' estimates – stakeholders are invited to highlight evidence to improve our understanding of this (and all other) delivery tasks.

   Communicating the rebate to recipients

14. We assume the cost of communicating the WHD to customers to be absorbed into wider business costs.

[41] ONS, Annual Survey of Hours and Earnings (ASHE), 2011Revised Results: http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/index.html

A4.4.3 Verification costs

15. Verification ensures that assistance provided through the WHD scheme is directed at the right households. Under the current scheme, under Broader Group, suppliers are required to verify that at least 5% of their broader group obligation meets the eligibility requirements as per their advertisements.

16. While the evidence on verification costs is limited, Government has received some information from suppliers that sheds light on the structure of the costs they face to verify this group.

17. We understand that the costs are broadly incurred in one of the following two/three ways:

    - Data Matching services – Currently, data matching services may be used to assist suppliers to verify rebate recipients who apply under certain criteria (e.g. Cold Weather Payment eligibility criteria)[42]. Based on existing evidence from suppliers using services provided by the Department for Work and Pensions (DWP), on average DWP are able to verify that between 80% - 95% of supplier records also have a record on the DWP administrative database. Of these, DWP were previously able to match between 50% - 80%. There are a number of reasons why data matching may not lead to direct matches with supplier records. These unmatched records may then be checked through other verification processes. Should suppliers choose to use this service, they would incur the following costs:

        a. Data matching contract – This is a fixed cost that any suppliers incur in setting up an arrangement to use data matching services. Based on discussions with DWP, we understand that contract costs may vary depending on the size of the group that need to be verified and the complexity of the criteria. As a result, we assume the costs faced by suppliers are therefore proportionate to their size/market share.

        b. Data matching runs – In addition to the contract set-up fee, suppliers face a variable cost, linked to the number of times they use a data matching service.

    - Suppliers face internal costs or costs of using a 3rd party matching service to verify records – we know this is labour intensive and therefore can be very expensive. Consequently, we assume this type of service is least preferred by suppliers and for the purposes of our analysis is not generally pursued by suppliers.

18. In the absence of firm evidence, we assume that suppliers will incur costs to verify 5% of households awarded any advertised eligibility criteria. We also assume suppliers will aim to minimise costs where possible and in doing so, will aim to maximise the services provided by cost-effective data matching services where possible and reduce the costs of using a third party matching service. For this reason, we assume that suppliers incur a cost in using the data matching service, with estimates from DWP on success rates from using their services and assume that suppliers face the costs of additional in-house or third party costs to verify any unmatched records. We assume the cost will only be incurred on 5% of the broader group obligation. To the extent that suppliers run verification on a larger proportion of households they award and find that the success of data matching to be lower than expected, our estimate will be an underestimate of the true cost of verification.

A4.4.4 Set-up & Search costs

19. As the WHD has been in operation since 2011, we assume that existing participating Suppliers will not face any set up costs and any search costs in relation to the broader group will be zero. This is based on the assumption that Suppliers will provide the discount to the same customers as in previous years and also because the Broader Group spending obligation is declining as Core Group eligibility is expanding.

20. This also assumes that if customers switch to a participating Supplier, they are more likely to make themselves known as a broader group eligible household.

21. However, with increasing competition in the energy supply market, it is a possibility that additional suppliers will be required to participate in the scheme in future years.

22. There is evidence to suggest that two new suppliers may well be obliged to participate in 2015/16 and while we cannot predict their market share, for the purposes of the analysis we have assumed that they will have an estimated market share value of 0.5% each.

23. We believe these set-up costs include upfront investment in the development or reconfiguration of IT systems as well as search costs in order to meet spending requirements under the Broader Group obligation.

24. There is limited evidence on what these costs will be for relatively small suppliers, however we have received information on costs from suppliers in their first year which suggest that new entrants are likely to face a cost between £4 -14 per rebate.

[42] Customers are made aware that their record may be verified in order to check their eligibility to receive Warm Home Discount.

A4.3 Summary of estimated delivery task costs

25. Table A4.3 summarises the total estimated cost of delivering the rebate (2013 real prices).

Table A4.3 – Administration Costs to Industry[43] (£'000s)

Reading Regulations	2 - 8
Processing	1,700 – 2,900
Exceptions	250 – 420
Verification	330 – 440
Set up	53 – 88
Search	26 – 91
Total	**2,400 – 4,000**

26. We would like to understand more about the costs of delivering the WHD and we welcome any costs suppliers believe will help Government understand more about the administration of the policy.

[43] Figures may not sum due to rounding.

Annex 5 – Estimating the Impact of Potential Changes to the Broader Group

A5.1 Introduction

1. The Broader Group element of the WHD scheme allows other low income and vulnerable households, who do not qualify under the Core Group, to apply for the same value rebate through their supplier.
2. The Government is seeking to gather views on this portion of the scheme with a view to making it more easily accessible to people most likely to be in fuel poverty and to also improve verification of rebate recipients. Ways in which these changes could be implemented include:
    a. introducing a standard set of eligibility criteria for the Broader Group, which all energy suppliers would have to include when advertising and offering the WHD. Suppliers would still have the flexibility to add any optional eligibility criteria, subject to Ofgem approval;
    b. the standard eligibility criteria could include those eligible to receive Cold Weather Payments[44] as well as low income working families;[45]
    c. suppliers could be required to undertake verification checks on all households under the standard criteria before a rebate is offered;
    d. suppliers would need to verify that at least 5% of households supported under optional (supplier specific) criteria qualify for support.
3. This section provides some data and analysis to facilitate discussion on some of proposals around changes to the broader group.

A5.2 Standard criteria

4. Currently, the eligibility of households to receive a WHD rebate under the broader group is largely at the discretion of suppliers, subject to approval from Ofgem. We have anecdotal evidence, which suggests the current structure of the scheme may act as a disincentive for WHD recipients to switch suppliers where they may have benefited from a cheaper tariff. In some cases it has meant moving supplier and being ineligible for a Broader Group rebate as a result. A set of standard criteria are seen as one potential solution to help overcome this potential barrier to switching.
5. The standard criteria could include those households eligible for Cold Weather Payments (CWP) and also low income working families. CWP are seen to be a helpful proxy for energy suppliers to identify the fuel poor and those households most likely to be vulnerable to the negative impacts of a cold home.

A5.3 Inclusion of Low Income Working Families

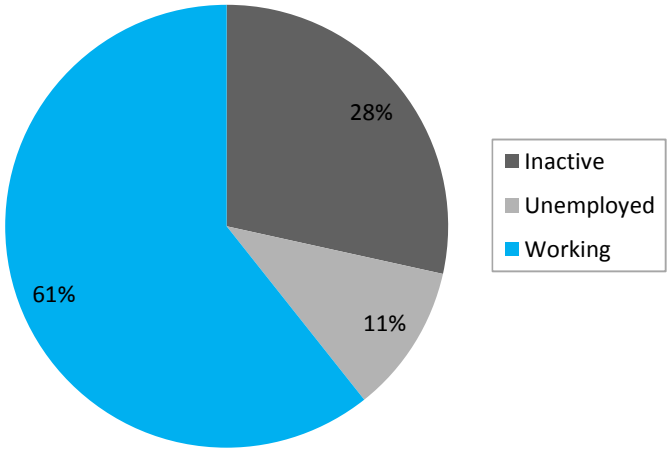
6. Evidence suggests that young children, the elderly and the long term sick or disabled are most vulnerable to the negative health outcomes associated with cold homes and living in fuel poverty[46]. It has been suggested that children in particular, are at higher risk than the general population because they are more susceptible to pick up infections and develop respiratory problems.
7. Recent Fuel Poverty statistics have also shown that a large number of fuel poor families (with at least one child under 16 in the household) are in work.

[44] Cold Weather Payment eligibility criteria are set out at: https://www.gov.uk/cold-weather-payment/eligibility

[45] In this context a low income working family is defined as a family with a child under the age of 5 or a disabled child under 16 and with a household income of less than £16,190.

[46] Hills(2011). Fuel Poverty: The problem and its measurement, CASE Report 69, Section 3.2, available at http://sticerd.lse.ac.uk/dps/case/cr/CASEreport69.pdf

Figure 6 : Proportion of fuel poor families in and out of work (2011)



8. As Figure 6 shows, 61% of all fuel poor families are in work[47]. In order to improve the targeting of fuel poor households most at risk of negative health impacts, one of the options being considered by Government is to extend any standardised criteria to capture more low income working households, should it go forward.

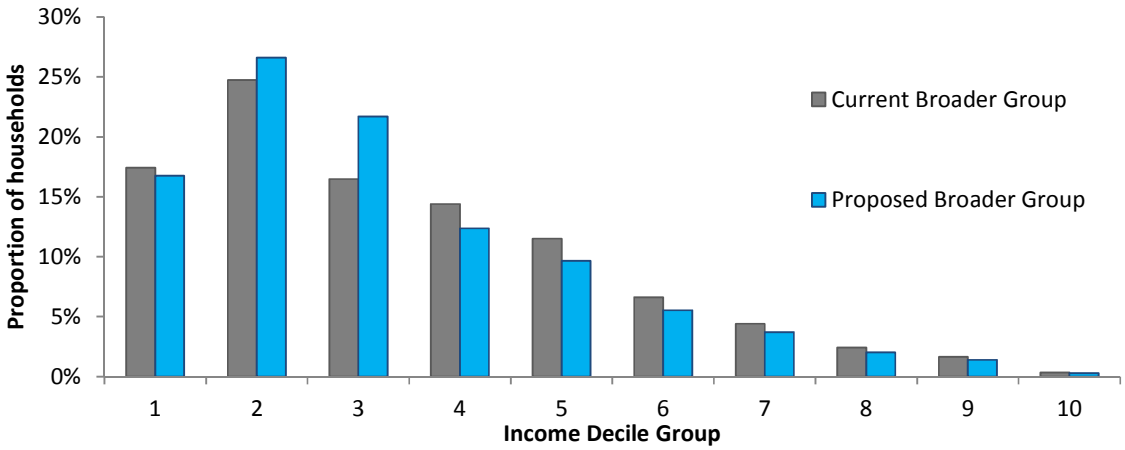
9. In Great Britain, there are approximately, 650,000 low income families with a household income of £16,190 or less and a child under the age of 5 or a disabled child under the age of 16. The existing targeting guidelines of Cold Weather Payments captures almost half of these households. Extending the guidelines using an income threshold of £16,190 and the age of the child, would capture any remaining households, of which a majority are in work.[48]

A5.3.1 Size and Income Distribution

10. Table A5.2 and Figure 7 shows how the size and income distribution of the broader group may change if low income working households are included as part of any standardised eligibility group.

Table A5.2 Broader Group eligibility

	Current Broader Group	Proposed Broader Group
Broader Group Size	1.7m	2m
Proportion of total GB households	7%	8%



[47] These figures have been sourced from the Fuel Poverty Datasets 2011, DECC .

[48] According to figures sourced through the 2011 Fuel Poverty Dataset, of the additional 300,000 households that may be consider for broader group rebates, 64% are in work (where no one in the household is claiming an out of work benefit).

Figure 7: Income distribution of current Broader Group compared to Alternative Broader Group

11. The amendment of the broader group guidelines would add approximately 300,000 households to the eligible broader group, assuming a move from the CWP group only. However, their inclusion also means that the concentration of households in the lower end of the income distribution also increases. Assuming support is delivered evenly across the eligible group, we expect that this will have a positive distributional impact.

A5.5 Impact of proposals on admin costs

12. We have strong evidence that verifying eligibility under standardised criteria is significantly cheaper than wider optional criteria. Therefore, to take advantage of this the Government is considering the merits of requiring suppliers to verify all households applying for the rebate under any standardised criteria. Should suppliers choose to award rebates to unmatched households under standard criteria, suppliers would be required to verify that 5% of these unmatched records are verified as meeting the standardised eligibility requirements.
13. Where suppliers choose any optional criteria, they would be required to provide evidence that 5% of households being awarded a rebate meet the eligibility requirements advertised.
14. Similar to our existing approach, we assume that should this kind of approach be implemented suppliers would aim to minimise costs and in doing so aim to use data matching services where possible. In the absence of further evidence to the contrary, we assume suppliers would only offer the rebate to households meeting any standard criteria. Therefore, suppliers would incur the cost of using any data matching services, as well as internal or 3rd party services to verify unmatched records.
15. To the extent that suppliers do choose optional criteria under which to award the rebate, our estimate of potential verification will be an underestimate.

Table A5.3 - Impact of changes in Verification

	Current Verification	Greater Verification
Verification Cost	£0.3m - £0.4m	£0.3m - £1.2m
Total Admin Cost	£2.4m - £4.0m	£2.4m - £4.9m
Cost per household	£0.09 - £0.15	£0.09 - £0.18

A5.6 Impact on NPV

16. Table A5.4 below demonstrates the illustrative impact on the social value of the policy if all the broader group considerations as stated above were taken forward.

Table A5.4 – Summary of discounted Costs and Benefits (£ millions)

		Current Preferred Option	Potential changes
Benefits	Equity weighted value of rebate	293	295
	Increase in Comfort	204	205
	Total Benefit	**497**	**499**
Costs	Equity weighted value of bill increase	358	359
	Admin costs to Industry[49]	[3]	[3]
	Reduction in utility from lower energy consumption (bill-payers)	2	2
	Resource Costs	57	57
	Carbon Costs	13	13
	Air Quality	3	3
	Administrative Costs – Government	2	2
	Total Cost	**435**	**436**
	NPV	**61**	**64**

17. If implemented, the NPV of the policy would increase (all other things constant) by £3m. This is influenced by the higher concentration of households in the lower end of the income distribution under the proposed broader group compared to the current Broader Group.

18. The inclusion of more low income households in the broader group increases the likelihood they will receive a rebate. This leads to a higher value placed on the rebate after equity weighting.

19. It is estimated that administrative costs would be marginally higher because of the higher rate of verification (does not show due to rounding).

[49] We assume admin costs are paid for through bill increases so this cost is a subset of the value of bill increases

Annex 6 – Estimating the impact of including Park Homes

A6.1 Introduction

1. Currently, residents in park homes do not have a direct customer relationship with energy suppliers, which means they are not part of the data matching process that would allow Core Group residents to receive rebates automatically off their bills. As a result, the current proposal is that under the Industry Initiatives element of the scheme, suppliers will be encouraged to offer rebates to park home residents who meet the Core Group or Broader Group criteria. This may work by suppliers funding a single third party to process applications from park home residents.
2. For the purposes of the NPV, the costs and benefits of extending the WHD to Park Homes are not included as a result of difficulties in making a robust assessment of monetary social value of other industry initiatives as described in section 3.3.3.
3. There is very little evidence available on this particular group and it is challenging to understand how many potentially eligible park home households are fuel poor and meet the eligibility criteria of the WHD Core and Broader Groups. Despite this, to understand the incidence of the issue, we have used the little available evidence to ascertain some understanding of Park Homes for suppliers.

A6.2 Limitations

- There is very little evidence available on Park Homes and none that Government is in possession of in relation to utilities in Park Homes.
- We recognise that the data used in conducting this analysis is more than 10 years old.

A6.3 Numbers of Park Homes

4. The Office for National Statistics includes the figures for Park Homes within their Mobile Homes category in the Census.
5. We assume only 80% of this category of mobile homes refer to Park Homes. This is based on assumptions regarding the number of caravans and houseboats in Great Britain as a proportion of the total number of mobile homes in Great Britain[50].

A6.4 Park Home households likely to meet Core Group Eligibility

6. In order to meet the eligibility requirements of the Core Group, it is necessary to obtain an understanding of the number of Pension Credit (Guarantee Credit and Guarantee & Savings Credit) households living in Park Homes, which currently is not collected by any statistical body. However, as the type of Pension Credit required for Core Group eligibility is targeted at low income pensioners, we believe evidence of low income pensioner households in park homes would be a good proxy for our estimates.
7. In a study of Park Homes commissioned by the Office of the Deputy Prime Minister in 2002[51], a survey of Park Homes in England and Wales revealed that the population living in Park Homes tended to be biased towards pension age population. Notably, the study finds, this is the result of many park homes operating age restrictions on entry, as well as Park Homes appearing to appeal disproportionately to older households.
8. At the time of the study approximately 70% of Park Home household responses to the survey were “elderly”.
9. For the purposes of our analysis we use this proportion and adjust it by stress testing against trends of the number of pension age households in Great Britain – which has been declining.
10. The survey also asks households their reasons for choosing to live within a Park Home. Whilst, the majority of “elderly” households respond to this question citing “idyllic reasons”, approximately 45% of respondents cited financial constraints as a reason for their decision. In the absence of further robust information, we stress test this proportion against trends of pension credit caseload as a proportion of the pension age population, which has also been decreasing over the last 10 years.

[50] ONS, 2011 Census, Table QS402UK

[51] Berkeley Hanover Consulting, Davis Langdon Consultancy and the University of Birmingham, 2002, Economics of the Park Homes Industry Office of the Deputy Prime Minister

Park Home households likely to meet Broader Group Eligibility

11. Similarly to understanding the figures for the Core Group, we use the 2002 study to provide assumptions to identify the potential number of eligible households in this group. This is much more complex, as there are many different types of households that could potentially be eligible that are not observable through this survey or through other means. However, the study does look at the number of "younger" households with children, which for the purposes of this analysis we define as families. In the survey approximately 10% of respondents are categorised in this way.

12. Unlike the elderly population in Park Homes, a larger proportion, nearly 90% of families cite financial constraints as part of their decision. As a second best proxy, we stress test this against trends in income support (with children aged 5 or under) caseload over time[52].

13. Based on these assumptions, Table A5.1 presents the following estimates of Park Home households eligible for the WHD under Option 2.

A6.5 Impact of administrative costs

14. The impact of this proposal, would likely lead to the displacement of other industry activity. However, we estimate the marginal cost of using non-core spending under industry initiatives to be less than if included within the supplier obligation of Core and Broader Group spending.

15. These additional costs include: data protection, IT reconfiguration, and additional processing costs. As shown in Table A5.1 we have estimated these costs to be between £16,000 and £69,000 if suppliers were required to provide rebates to households through the main obligation. These estimates are out central estimates, however much uncertainty remains and there remains a risk that costs be higher than anticipated.

16. The admin cost figures in table A5.1 are based on an estimated response rate of Park Home households to advertising of available support through Warm Home Discount. We have based this on evidence of response rates[53] of potential Core Group eligible customers who receive letters informing them of energy bill support they may be able to receive.

17. Spending under Industry Initiatives means that costs can be spread over a number of suppliers rather than require suppliers to face these costs individually. This will also ensure that these additional costs are not passed on to bill payers.

Table A5.1 – Estimated Number and Admin Costs of Eligible Households in Park Homes

	Core Group	Broader Group	Administrative Cost if included in Core and Broader Group
Eligible Households	8,000 – 24,000	4,000 – 6,000	£16,000 – £69,000
Total[54]	11,000 – 31,000		

18. We would anticipate coverage of support to households in Park Homes to be higher with proposals that are less costly to implement. However, a degree of uncertainty remains regarding the number of Park Home households that would receive support through an Industry Initiative or through the supplier obligation. Activity will be monitored through Ofgem's annual report on the scheme.

[52] Department for Work and Pensions Statistical Tabulations, Tabtool: http://tabulation-tool.dwp.gov.uk/100pc/tabtool.html

[53] The response rate of the Core Group to Warm Home Discount letters has been estimated at 45% calculated using data on call volumes and letters sent.

[54] Figures may not sum due to rounding.

Annex 7 – Off-gas grid households

A7.1 Introduction

1. Government would like to provide more help to those living off the gas grid. Low income households without access to mains gas are particularly at risk of being in fuel poverty, and the depth of their fuel poverty is on average significantly worse than typical fuel poor households. This is demonstrated by the average fuel poverty gap of off-gas fuel poor homes (£781 in 2012) being significantly higher than the average of all fuel poor homes in England (£443 in 2012).[55]
2. These higher fuel costs are coupled with a higher incidence of solid walls in off-gas grid properties, particularly those living in rural areas, which has resulted in these households being more likely to experience severe fuel poverty than their on-gas grid counterparts[56].
3. The current proposal is for participating energy suppliers to providing additional assistance to off-gas grid households as part of Industry Initiatives.
4. As with Park Homes, the costs and benefits of off-gas grid homes benefiting through Industry Initiatives are not included in the NPV values as result of difficulties in making a fair assessment of the monetary social value of other industry initiatives as described in section 3.2.3.

Table A6.1 – Fuel Poverty Gap of Households off and on gas grid in England

	On-grid	Off-grid
Average Fuel Poverty Gap	£332	£789

A7.2 Impact on administrative cost

5. Participating suppliers have informed us of the difficulty in identifying existing customers that live off the gas grid. These costs include further investment in reconfiguring IT systems to identify households, as well as processing costs.
6. These costs, if funded through the Core and Broader Group spending obligation, are likely to lead to greater costs being passed on through higher bills.
7. It is assumed that the marginal cost of providing additional assistance to off-gas grid households will be lower if provided through Industry Initiatives, ensuring the impact on industry is cost-neutral and so the impact on customer bills is minimised.

[55] Fuel Poverty Detailed Tables 2014, available at: https://www.gov.uk/government/publications/fuel-poverty-detailed-tables-2012

[56] Fuel poverty: a framework for future action, DECC (2013), available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211180/FuelPovFramework.pdf