



Department for
Business, Energy
& Industrial Strategy

Warm Home Discount Scotland

Supporting analysis

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1. Introduction

1. This annex provides an overview of the analysis undertaken to assess the impact of the proposed Warm Home Discount (WHD) scheme in Scotland for 2022/23 to 2025/26. Given the Scotland scheme will largely mirror the WHD scheme in place across Great Britain in 2021/22, we refer to previous impact assessments that covered Scotland in addition to England & Wales. Where possible we have included new analysis here that is specific to Scotland.
2. WHD provides direct energy bill support, in the form of a rebate on energy bills, for fuel poor, low income and vulnerable households. This means that the policy both contributes to the government's fuel poverty objectives, but also helps to address broader distributional concerns across low income households arising from energy price rises and the impact of energy and climate change policies funded through bills.
3. In the 2020/21 scheme year the WHD provided help to more than 2.2m low income and vulnerable households in Great Britain. This comprised rebates of £140 paid to over 1 million lower income pensioners and around an additional 1.2m low income and vulnerable customers, and a range of other support to vulnerable households. Approximately 230,000 rebates (~10% of the GB total) were provided to households in Scotland in 2020/21¹.
4. Up until March 2022, the WHD scheme had an overall expenditure target for each financial year, divided into 3 main subgroups. About half of annual spending was on automatic rebates to the electricity bills of low income pensioners in receipt of a subset of Pension Credit, known as the 'Core Group'. This is the structure of the scheme which will continue in Scotland.
5. The level of annual Core Group expenditure was determined by the number of qualifying households each year. Customers eligible for the Core Group were identified by the Department for Work and Pensions. The remainder of the spending profile was referred to as 'Non-Core' expenditure. Each year the Secretary of State for the Department for Business, Energy and Industrial Strategy sets a minimum level of expenditure that participating suppliers are required to undertake on Non-Core activities in that scheme year. The 'Non-Core' activities were divided into two elements: the Broader Group and Industry Initiatives.
 - The 'Broader Group' - participating suppliers provided energy bill rebates to a variety of low income and vulnerable households, mainly of working age, who are not part of the Core Group. The number of rebates delivered to the Broader Group in GB was around 1.2 million.

¹ www.ofgem.gov.uk/publications/warm-home-discount-annual-report-scheme-year-10

- Industry Initiatives - participating suppliers were permitted to spend up to a collective GB total of £40m per year on actions to support households in fuel poverty or at risk of fuel poverty². These activities included providing debt write-off, installing energy efficiency measures and offering energy saving advice or providing rebates to certain households.
6. From 2022, the WHD Scotland will run alongside the expanded and reformed WHD for England and Wales, the details of which are set out in the government response to consultation, published on 1 April 2022.
 7. The reforms that are being implemented in England and Wales cannot be directly replicated in Scotland because the Valuation Office Agency (VOA), which we will use to identify homes in Core Group 2 that are high cost to heat, does not have jurisdiction in Scotland. The Scottish Assessors (the Scottish equivalent of the Valuation Office Agency) do not collect equivalent data in Scotland.
 8. The Scotland WHD would increase proportionately in line with the GB-wide increase to the scheme: from £350m to £475m in 2020 prices. Based on the apportionment methodology previously consulted on, the Scottish scheme will be 9.4% or £44.65m (in 2020 prices) of the overall scheme value³.
 9. This document sets out the government's appraisal of the WHD Scotland scheme.

² Industry initiatives are split across obligated energy suppliers according to their market share.

³ The number of electricity and gas meter points in Scotland as a proportion of Great Britain, averaged over the latest three years of data (2017-2019). Calculated using sub-national electricity and gas meter point data: www.gov.uk/government/collections/sub-national-electricity-consumption-data and www.gov.uk/government/collections/sub-national-gas-consumption-data

2. Rationale for intervention

10. The WHD exists as part of the government's aim to tackle and alleviate fuel poverty. Fuel poverty is defined in the Warm Homes and Energy Conservation Act 2000 as:

“a person [who] is a member of a household living on a lower income in a home which cannot be kept warm at reasonable cost.”

11. The last iteration of the WHD ended when Scheme Year 11 (2021/22) concluded in March 2022. Extending the WHD scheme in Scotland will enable government to provide continued support toward vulnerable households. These benefits are discussed in greater detail below:

- **Tackling Fuel Poverty:** Living at low temperatures poses a risk to health, with a range of negative morbidity and mortality impacts associated with exposure to the cold. The Marmot Review Team report on cold homes and health⁴, the Hills Fuel Poverty Review⁵ and recently published BEIS research⁶ set out the strong body of evidence linking low temperatures to these poor health outcomes. Government has fuel poverty targets in place which seek to reduce the number of people living in a cold home over time and hence improve health outcomes. Fabric changes to fuel poor homes, such as installing insulation, would sustainably protect vulnerable households over the long term. However, it is not possible to install energy efficiency measures in all fuel poor households immediately and consequently a short term solution is necessary. The WHD provides vulnerable households with a rebate on their energy bill and hence encourages occupants to heat their homes to a warmer temperature. This reduces the number of fuel poor households and decreases the fuel poverty gap⁷ for recipients that remain fuel poor. As a result, the incidence of health problems associated with cold homes should reduce.
- **Distributional Equity:** High energy prices disproportionately affect low income households because heating is a necessity good (the demand for energy is income inelastic). Therefore, energy costs, on average, make up a relatively larger proportion of low-income households' expenditure than higher income households. This issue is exacerbated by properties with low energy efficiency, where households in the bottom four income deciles live in homes with a Fuel Poverty Energy Efficiency Rating (FPEER) of D-G and must spend more on energy to heat their home.

⁴ Marmot Review Team (2011). The Health Impacts of Cold Homes and Fuel Poverty. Available at: www.instituteofhealthequity.org/resources-reports/the-health-impacts-of-cold-homes-and-fuel-poverty

⁵ Hills (2011). Fuel Poverty: The Problem and Its Measurement. Available at: <http://eprints.lse.ac.uk/39270/1/CASEREport69%28Isero%29.pdf>

⁶ www.gov.uk/government/publications/heat-energy-efficiency-smart-technology-and-health-review

⁷ The depth of fuel poverty is measured by the fuel poverty gap. The fuel poverty gap is the reduction in fuel costs needed for a household to not be in fuel poverty

- **Cost-of-living:** The negative economic impacts of the coronavirus pandemic are likely to have continued impacts on incomes and unemployment. This will be compounded by the recent increases in energy prices and cost-of-living. Affected households are likely to face the distributional equity issues laid out above. The WHD scheme would therefore continue to protect vulnerable low-income households including pensioners.

3. Policy option

12. The objectives of the WHD are to:

- Lower the depth of fuel poverty⁸ through providing energy bill support to low income and vulnerable households who are at risk of or in fuel poverty.
- Alleviate distributional inequity, by lowering the disproportionate impact of the cost of energy on low income vulnerable households.

13. In the 2020 Energy White Paper, the government committed to extending the WHD and increasing its value to £475m (in 2020 prices) across Great Britain. From 2022/23 the government intends to implement a WHD scheme in Scotland that will largely mirror the WHD in place across GB in 2021/22, apportioning 9.4% of the increased GB spending envelope to Scotland. This apportionment is based on the number of domestic gas and electricity meters averaged over a three-year period from 2017-2019. This was set out in the government's response to the consultation on proposals for the England and Wales WHD scheme⁹.

14. Using this apportionment, the total spending envelope for WHD Scotland equates to £44.65m in 2020 prices. This will be adjusted using inflation forecasts for each year of the scheme. We plan to estimate inflation using the latest available CPI forecasts and set the annual spending obligations in Regulations to provide certainty around the budget across the scheme years. In 2022/23 we estimate the total spending envelope for Scotland to be £49m.

15. The previous GB scheme structure will continue in Scotland; the Core Group and non-core spending split between Broader Group rebates and Industry Initiatives.

- **Core Group** – households with a Pension Credit Guarantee Credit recipient receive direct electricity bill rebates from their obligated energy supplier;
- **Broader Group** – certain low income and vulnerable households can apply to their energy supplier to receive electricity bill rebates. There is a set of mandatory criteria and suppliers can offer additional criteria subject to Ofgem approval;
- **Industry Initiatives** – energy suppliers provide a range of assistance, usually through third parties. This can include benefit entitlement checks, debt assistance, energy advice, smart meter advice and energy efficiency measures provided to low income and vulnerable households. The provision of help is not limited to the customers of obligated suppliers.

⁸ Measured by the fuel poverty gap. The fuel poverty gap is the reduction in fuel costs needed for a household to not be in fuel poverty.

⁹ www.gov.uk/government/consultations/warm-home-discount-better-targeted-support-from-2022

16. The eligibility criteria for the Core Group and Broader Group are set out in Table 1. The Core Group eligibility criteria will remain unchanged.
17. Housing Benefit has been added to the Broader Group eligibility criteria, consistent with the England and Wales WHD. Housing Benefit is a means-tested benefit and is being replaced by Universal Credit. As with the other means-tested benefits that form the Broader Group eligibility criteria, eligibility will be subject to the recipient also having a child under 5 or disabled child.
18. The income threshold for Child Tax Credit will increase from £16,190 to £17,005 in 2022/23, in line with the threshold for CTC awards¹⁰ and this will automatically increase every year in line with CPI (to the end of September previous to the start of the scheme). Similarly, we would increase the Universal Credit (UC) earnings threshold to mirror the CTC threshold on a monthly basis.

Table 1: WHD Scotland eligibility criteria

Current scheme low-income eligibility rules:

Core Group	Broader Group ⁽ⁱ⁾
Pension Credit Guarantee Credit (PCGC)	Income related Employment and Support Allowance ⁽ⁱⁱ⁾ Income based Jobseeker’s Allowance ⁽ⁱⁱ⁾ Income Support ⁽ⁱⁱ⁾ Housing Benefit ⁽ⁱⁱ⁾ Universal Credit ⁽ⁱⁱ⁾ Child Tax Credit ⁽ⁱⁱ⁾

(i) The supplier sets the eligibility criteria for the provision of rebates, subject to Ofgem approval. However, beneficiaries must wholly or mainly be living in fuel poverty or in a fuel poverty risk group and the criteria must at least include persons in receipt of the benefits listed above.

(ii) Further mandatory eligibility criteria apply in addition to the base requirement to be in receipt of the relevant benefit, such as requirements to have parental responsibility for a child under 5 or to be in receipt of a particular disability, pensioner or other element of the benefit.

19. As outlined in the WHD Scotland consultation, there will be flexibility in non-core spending. Energy suppliers will be able to transfer up to 100% of their Broader Group target to Industry Initiatives, subject to approval from Ofgem. The consultation also proposed a £7m per annum spending cap on Industry Initiatives, which is broadly equivalent to what we expect the value of Industry Initiatives to be in England and Wales in the fourth year of the scheme. This cap would be distributed between suppliers according to their market share and can be exceeded, subject to Ofgem approval.
20. For the purposes of calculating an illustrative spend profile and how it might be broken down between the three elements of the scheme, if one assumes the £7m Industry Initiative cap was reached Table 2 shows the estimated spend on the Core Group and

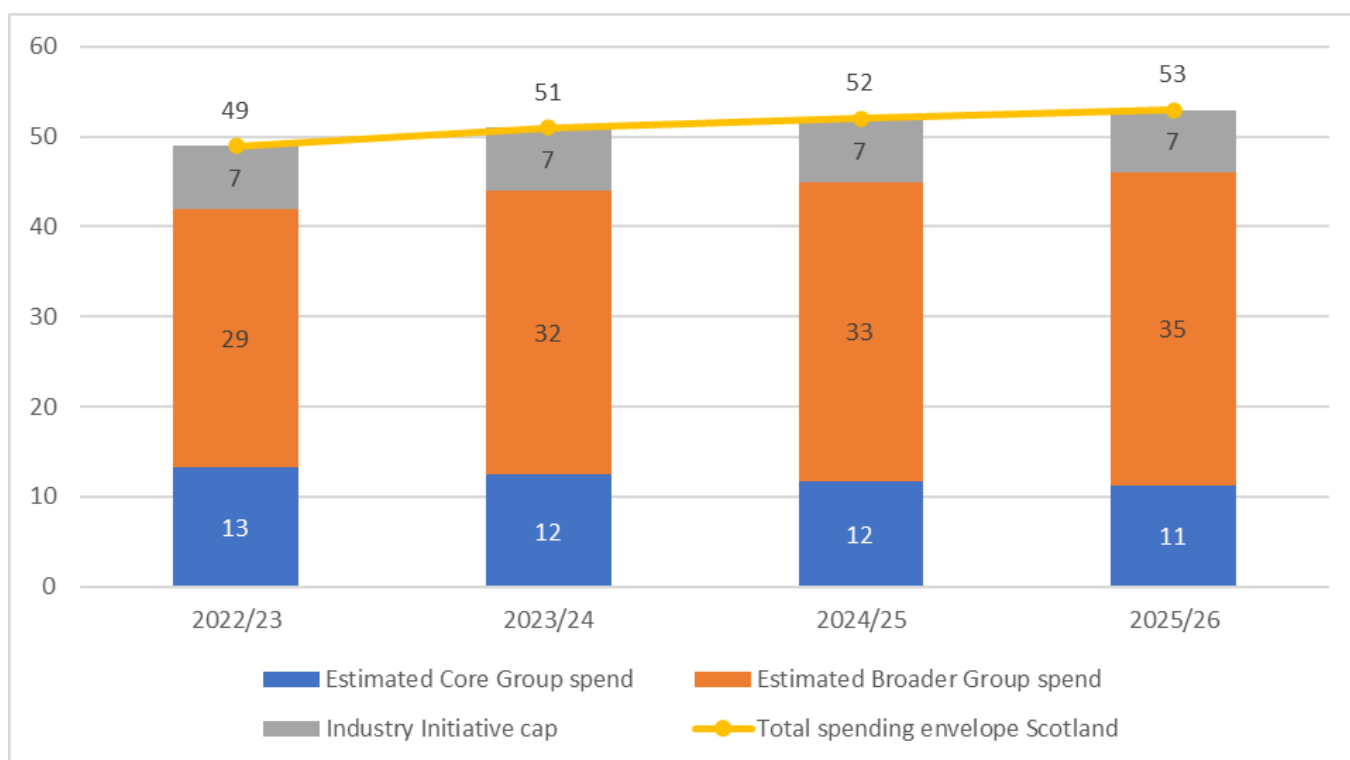
¹⁰ Threshold for those entitled to Child Tax Credit only: www.gov.uk/government/publications/rates-and-allowances-tax-credits-child-benefit-and-guardians-allowance/tax-credits-child-benefit-and-guardians-allowance

Broader Group. This uses DWP estimates for the size of the Core Group and assumes an ~86% match rate to energy supplier customer accounts (see assumptions section for an explanation of the 'Core Group coverage'). This breakdown is also shown in Figure 1.

Table 2: Illustrative spend levels in each year of WHD Scotland (£m)

£m	2022/23	2023/24	2024/25	2025/26
Estimated Core Group spend	13	12	12	11
Estimated Broader Group spend	29	32	33	35
Industry Initiative cap	7	7	7	7
Total spending envelope Scotland	49	51	52	53

Figure 1: Illustrative spend levels in each year of WHD Scotland (£m)



21. To remain consistent across Great Britain the value of the rebate provided under the Core and Broader Groups will be set at £150. This reflects an increase to the current rebate of £140, which will offset the additional cost of the policy from increasing the overall spending envelope (an extra ~£5 per household).
22. As per the England and Wales scheme, in 2022/23 suppliers will be obligated for the whole scheme if they have a GB-wide domestic market share of 50,000 or more domestic customer accounts. From 2023/24 that threshold will reduce to 1,000 domestic customer accounts. To account for the differences in proportions of customers suppliers have in the different nations, allowances will be made for these differences in setting the non-core obligation, described in the government response to the WHD Scotland consultation.

23. In summary, the key features of the WHD Scotland scheme are to:

- Extend the scheme from April 2022 to March 2026.
- Increase Scotland funding in line with the increases in overall GB funding, apportioning 9.4% of the GB spending envelope to Scotland.
- Allow flexibility within non-core spending (between Broader Group rebates and Industry Initiatives)
- Increase the energy bill rebate to £150 per eligible household.
- Take a staged approach to reducing the supplier obligation threshold.

4. Impact analysis

4.1 Impact on households

24. Given we are allowing flexibility between Broader Group and Industry Initiatives spend, as outlined above, there is uncertainty around the expected total number of rebates issued vs the spend on Industry Initiatives. However, if we were to assume there is £7m spending on Industry Initiatives each year (the 'cap', though can be exceeded subject to Ofgem approval) we would expect that around 280,000 low income and vulnerable households would receive a rebate in the first year of WHD Scotland. Table 3 shows this illustrative example for each year of the scheme. There could be more or fewer Broader Group rebates if the Industry Initiatives spend was lower or higher, respectively.

Table 3 Illustrative number of WHD Scotland rebates broken down by Core Group and Broader Group

	2022/23	2023/24	2024/25	2025/26
Core Group	89,000	83,000	78,000	75,000
Broader Group (if Industry Initiatives spend = £7m per year)	191,000	211,000	222,000	231,000
Total rebates	280,000	293,000	300,000	307,000

25. We estimate that there were around 230,000 WHD rebates issued in Scotland in 2021/22, therefore this illustrative increase in 2022/23 of 50,000 households receiving a rebate represents an increase of around 22%. Overall, the increase in non-core spending in Scotland between 2021/22 and 2022/23 is over 50%. This is the same as the increase in non-core spending in England & Wales.
26. We have published previous impact assessments of the WHD scheme in the proposed form (or similar) for Scotland at GB level¹¹, which are based on England-only data that was scaled up to represent the whole of GB. Although not repeated here, for the purposes of this document we assume that the characteristics of recipients in Scotland would be largely similar to those in England.
27. However, given that the non-core element makes up a larger share of the total spending from 2022/23 onwards, compared to previous years of the WHD, there will be a larger share of rebates to working age households. In 2022/23 around a third of the rebates would be given to the Core Group (Pension Credit Guarantee Credit recipients), with the remaining two-thirds going to predominantly working age households. Again, this is using the illustrative example that £7m is spent on Industry Initiatives.

¹¹ For example: www.gov.uk/government/consultations/warm-home-discount-scheme-2021-to-2022

28. The increase in overall spending is estimated to increase the overall bill impact by ~£5 per year, from around £14 per dual fuel billpayer to £19. The £10 increase in rebate value from £140 to £150 would more than offset this effect for those that receive the rebate.
29. The WHD scheme is a fuel poverty scheme, which is why we use the means-tested benefits, with associated sub-criteria for the Broader Group, to target low income and vulnerable households, For Scotland¹², a household is in fuel poverty if:
- in order to maintain a satisfactory heating regime, total fuel costs necessary for the home are more than 10% of the household's adjusted (i.e. after housing costs) net income; and
 - if, after deducting those fuel costs, benefits received for a care need or disability¹³ and childcare costs, the household's remaining adjusted net income is insufficient to maintain an acceptable standard of living.
30. We can't currently estimate the fuel poverty targeting rate of WHD Scotland, as we do not have access to the required data to identify households in receipt of the relevant means-tested benefits (and the sub-criteria) used for WHD eligibility, and subsequently analyse their fuel poverty status. However, we would expect the scheme to reach disproportionately more fuel poor households given that receipt of means-tested benefits is a relatively good proxy for having a low income¹⁴. Fuel poverty rates in Scotland in 2019 for those on the lowest incomes (<£200 and £200-300 per week) were 96% and 69% respectively¹⁵.
31. In addition, given the different way of measuring fuel poverty in Scotland, the fuel poverty rate in Scotland (24.6% in 2019¹⁶) is higher than in England (13.4% in 2019¹⁷) therefore it is likely that a larger proportion of fuel poor homes will be reached by the WHD in Scotland than the proportion previously reached by the equivalent GB scheme in England.

4.2. Cost and benefits

32. The costs and benefits in this section present both equity weighted and non-equity weighted Net Present Values (NPVs) of the scheme. The objective of WHD is the redistribution of income to low income households, to provide support to households who cannot afford to heat their home sufficiently. The cost of the energy bill rebate is spread across all bill payers who are with an obligated energy supplier (99% of households were

¹² As set out in section 3 of the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act

¹³ Benefits received for a care need or disability include: disability assistance, personal independence payment, attendance allowance, severe disablement allowance and disability living allowance received by members of the household.

¹⁴ English Housing Survey data from 2018 suggests over 60% of the equivalent WHD recipient households in England are in the lowest three income deciles, and 85% below the median.

¹⁵ www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/6/ Table 39

¹⁶ www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/6/

¹⁷ www.gov.uk/government/statistics/annual-fuel-poverty-statistics-report-2021

estimated to be with an obligated supplier in January 2022). The benefits to recipients of the WHD typically go to households in lower income decile groups, given the targeting is to households on means-tested benefits. Equity weighting is appropriate as it quantifies higher marginal utility of additional income to lower income groups in contrast to lower marginal reductions in utility to high income groups.

33. The equity-weighted values reflect income transfers across different income deciles arising from:
- The equity weighted value of ‘comfort-taking’ affecting households in receipt of a WHD rebate; it is assumed households spend 41%¹⁸ of the rebate on increased energy consumption for heating (comfort-taking).
 - The equity weighted value of increased income achieved from an energy bill rebate (it is assumed the remaining 59% of the rebate is used to subsidise income expenditure).
 - The equity weighted value of increased bills affecting all household customers of obligated suppliers.

The distributional weightings used to calculate equity weighted NPVs are listed in Table 5.

34. Carbon emissions and air quality costs arising from changes in energy consumption are included as costs and benefits. The cost of WHD is added to households’ energy bills which reduces household energy demand slightly, leading to lower energy consumption and subsequent emissions. Households in receipt of WHD are expected to increase their energy consumption leading to higher emissions.
35. To calculate an NPV for WHD Scotland we have had to use data and assumptions based on households in England as a proxy for Scotland. This includes the following:
- Income data for WHD recipient, billpayer and all households. The income distribution and median incomes of all households is used to calculate the equity weights (see Annex). The income distribution of WHD recipients and billpayers is used to calculate the relevant costs and benefits by income decile, which are then equity weighted. Of most importance is the assumption that recipients will have a distribution skewed towards the lower deciles, which has a positive effect on the equity weighted NPV. It is appropriate to assume that recipients in Scotland will be skewed towards the lowest deciles too, although the exact distribution may differ.
 - Average theoretical energy consumption per household and the distribution between different fuel types (electricity, gas etc.) is used in estimating the impact of the WHD on resource, carbon and air quality costs. Comparing subnational electricity consumption data¹⁹ for England and Scotland in 2020 suggests that mean electricity consumption per household in Scotland is within 1% of England. Similarly for gas²⁰, the mean gas

¹⁸ This is known as the “Labelling Effect”, see the assumptions section for more details.

¹⁹ www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics

²⁰ www.gov.uk/government/statistical-data-sets/gas-sales-and-numbers-of-customers-by-region-and-local-authority

consumption per meter in Scotland is within just over 1% of England. This suggests that data on average energy consumption in England should be a good proxy for Scotland.

36. The NPVs present central estimates and these are sensitive to the actual income groups who receive the WHD rebate. A sensitivity analysis of the key assumptions has been undertaken later in this section.

Table 4: Estimated costs and benefits of WHD Scotland (over four years: 2022/23 – 2025/26)

	Description	Unweighted	Equity weighted
Benefits	Value of rebate (excluding the impact of Industry Initiatives)	94	223
	Increase in comfort taking	65	155
	Industry Initiatives	27	27
	Reduction in resource costs due to bill increase	0.5	0.5
	Reduction in carbon costs due to bill increase	0.6	0.6
	Reduction in air quality costs due to bill increase	0.04	0.04
	Total benefits	187	406
Costs	Value of bill increase	-190	-284
	of which: administrative costs to industry*	-4	-4
	Reduction in utility from lower energy consumption (billpayers)	-1	-2
	Resource costs	-32	-32
	Carbon costs	-40	-40
	Air quality costs	-2	-2
	Administrative costs to government	-1	-1
	Total costs	-266	-361
NPV	Total NPV (£m)	-79	45

Figures may not add up due to rounding (figures are shown rounded to the nearest £m).

Based on real 2022 prices, and the number of expected recipients in 2022

*Administrative costs to industry are included in the value of bill increase

4.3 Equalities analysis

37. The Public Sector Equality Duty (the 'Duty') is a statutory requirement imposed by section 149 of the Equality Act 2010²¹. In broad terms, the Duty requires public bodies to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations between different people when carrying out their activities. Advancing equality of opportunity includes having due regard to the need to remove or minimise disadvantages, take steps to meet the needs of persons sharing a protected characteristic and encouraging their participation in activities where their participation is disproportionately low. The following relevant protected characteristics are set out under the Duty:

- age
- disability
- gender reassignment
- marriage or civil partnership
- pregnancy and maternity
- race
- religion or belief
- sex
- sexual orientation

38. The government does not expect significant differences in the characteristics of WHD Scotland recipients in 2022/23-2025/26 compared to earlier years of the similar GB scheme that operated in Scotland, particularly within the Core Group and Broader Group respectively.

39. The Core Group eligibility (Pension Credit Guarantee Credit recipients) is unchanged from previous years therefore we'd expect recipients to have similar characteristics across the years. The overall increase in spending means that spending on the Broader Group will make up a larger proportion of the total than previously, so we should see more working age households in Scotland receiving rebates. In [paragraph 27](#) we estimated that around a third of rebates would go to pensioners in the Core Group and this is a good proxy for the proportion of older households receiving rebates, given that Broader Group eligibility is predominantly working age benefits. The Scottish House Condition Survey 2019²² shows that 36% of the fuel poor population are older households, so this is broadly consistent with the Core Group share of the rebates.

²¹ www.gov.uk/guidance/equality-act-2010-guidance

²² www.gov.scot/publications/scottish-house-condition-survey-2019-key-findings/pages/6/ Figure 24

40. Equalities analysis undertaken for an England & Wales scheme using data for England-only showed that targeting households with similar eligibility to this Scottish scheme²³ generally had a positive impact on the protected characteristics we were able to analyse in the data. Households with a long-term disability or illness, single ethnic minority households, and households where the household representative was single were all more likely to receive a rebate, compared to their share of the population. The distribution of rebates across these characteristics was also more representative of the fuel poor population than the overall population.
41. Overall, government does not expect the WHD scheme to discriminate negatively based on the protected characteristics that we have been able to analyse (using England data as a proxy for Scotland), and therefore does not contribute to any pre-existing discrimination structure. As noted in previous WHD Impact Assessments, the first-come first-served application nature of the Broader Group may put persons sharing certain protected characteristics at a disadvantage. However, we consider the Broader Group application process to be a proportionate means of achieving a legitimate aim – namely to ensure that a wider group of low income and vulnerable households can receive the rebate beyond the Core Group.

4.4. Assumptions

English Housing Survey 2017/18

42. As outlined in [paragraph 35](#), a key assumption we have made to calculate an NPV for WHD Scotland is to use analyses of the English Housing Survey 2017/18, for households in England, and assume they are representative of households in Scotland. The rationale and justification of the specific assumptions is outlined in [paragraph 35](#).

Industry initiatives spending

43. For the purposes of the impact analysis presented in this document, we have assumed £7m of the total spending envelope each year will be spent on Industry Initiatives. This is based on the ‘soft cap’ as presented in the government response to the WHD Scotland consultation. This value could be higher/lower given the flexibility permitted between the Broader Group and Industry Initiatives.

Carbon values

44. The NPV estimates in this document are based on central carbon values from the Green Book supplementary guidance²⁴. The sensitivity analysis later in this section shows the combined effects of testing different input assumptions.

²³ The “No reform” option in the England & Wales Final Impact Assessment closely resembles the 2022 Scottish scheme, although doesn’t account for the increased spend on the non-core obligation.

www.gov.uk/government/consultations/warm-home-discount-better-targeted-support-from-2022

²⁴ www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

Health impacts

45. A previous WHD evaluation²⁵ found a small increase in the temperature of properties in receipt of the rebate and concluded it is likely to have led to health improvements amongst WHD recipients. However, it is difficult to monetise the health benefits attributable to the WHD of any temperature increases and therefore these have not been monetised. Therefore, this is likely to underestimate the NPV of the scheme.

Labelling effect

46. Previous WHD Impact Assessments assumed that 41% of the total WHD rebate is spent on improving the thermal comfort of the recipients' homes. This is based on research for the Winter Fuel Payment which showed that labelled transfers (e.g., the label "Winter Fuel Payment") led to a higher proportion of the transfer being spent on fuel use than would typically be expected for a non-labelled transfer²⁶. The WHD evaluation's findings regarding the labelling effect are mixed and do not offer conclusive results so the 41% assumption has been retained and is consistent with other Impact Assessments on the WHD.

Core Group coverage

47. The assumed size of the Core Group eligible pool in Scotland in 2022 is based on the latest DWP counts of Pension Credit Guarantee Credit claimants (in April 2022). This is adjusted for the following three years of the scheme using the GB trend in forecast projections of PCGC claimants, which take account of retirement ages and attrition. The size of the Core Group will determine the size of the non-core obligation.

Scotland apportionment

48. In accordance with the government response to the England and Wales WHD consultation, we have apportioned 9.4% of the total spending envelope for GB to Scotland, based on the proportion of electricity and gas meters in Scotland compared to the total in GB (a three-year average using data from 2017-2019)²⁷.

Administration costs to industry

49. In Great Britain we estimated the total industry administration costs to be approximately £10m per year, using data provided by energy suppliers as part of the consultation of the WHD extension for Scheme Year 11 (2021/22)²⁸. To estimate administration costs for a Scotland-only scheme we have simply taken 10% of these costs (similar to the 9.4% assumption used for the overall spending envelope). Although this assumption is

²⁵ www.gov.uk/government/publications/warm-home-discount-evaluation-2010-to-2015

²⁶ 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: www.ifs.org.uk/wps/wp1110.pdf

²⁷ www.gov.uk/government/collections/sub-national-electricity-consumption-data and www.gov.uk/government/collections/sub-national-gas-consumption-data

²⁸ This estimate was used in the final stage Impact Assessment for the 2021/22 WHD extension: www.gov.uk/government/consultations/warm-home-discount-scheme-2021-to-2022

uncertain, any sensitivity in this assumption is unlikely to significantly affect the overall value for money of the scheme, as can be seen in the following section on sensitivity.

Administration costs to government

50. The government will bear some of the administrative costs of delivering the rebates, especially with respect to data matching activities for delivering Core Group rebates (including the sweep-up and helpline elements of the process that are overseen by DWP). This is estimated at ~£2m for GB, based on actual costs from previous years. Similarly to the above assumption on administration costs to industry, we have assumed that 10% of government administration costs can be apportioned to the Scottish WHD scheme.

Income elasticity

51. Income elasticity is used to measure the change in energy demand because of a change in income, and the income elasticities used are based on a study by Jamasb and Meier (2010)²⁹. Income elasticity influences the changes in consumption and therefore resources, emissions and air quality, where billpayers are overall expected to make small changes to their energy consumption and low income recipients of WHD are expected to increase their energy consumption at a greater rate than billpayers. This causes a net increase in energy consumption.

4.5 Sensitivity of key assumptions

52. Given the uncertainty around the key assumptions, the following sensitivity analysis has been undertaken:

- Administration Costs
- Energy Demand Response
- Energy Prices and Emissions Cost
- Combination of all scenarios

53. Where possible, the sensitivity analysis is based on scenarios provided alongside the central assumptions. For instance, the authors of the energy price and emissions costs data, and the labelling effect data, provide high and low boundaries for their estimates, which are used in this analysis. However, assumed industry administration costs are based on participating suppliers' estimates, for which high and low boundaries were not provided. In this case, a discretionary high/low margin of 25% is applied.

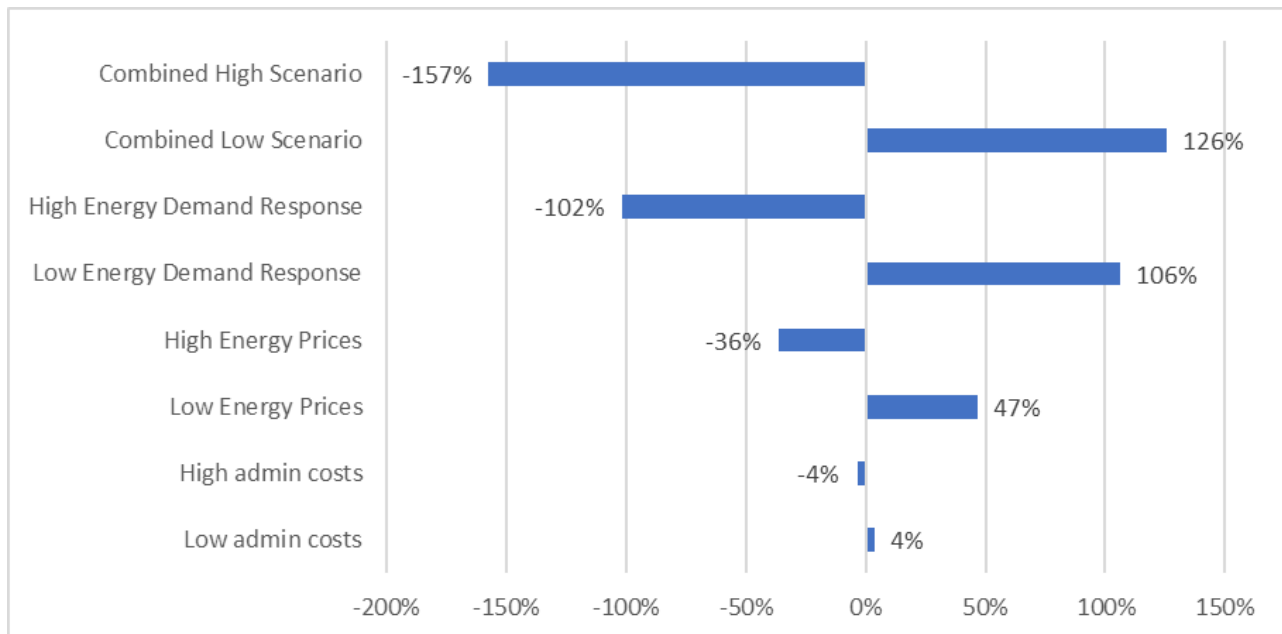
54. The NPV is particularly sensitive to the labelling effect assumption i.e. if rebate recipients spend a larger proportion of their rebate on energy then this would lead to a negative equity weighted NPV. For example, if recipients spend 66% of the rebate on energy (compared to the central 41% assumption) the equity weighted NPV would reduce to -

²⁹ Source: Jamasb and Meier (2010), Household Energy Expenditure and Income Groups: Evidence from Great Britain. www.repository.cam.ac.uk/handle/1810/229412

£1m from £45m, or -102% as shown in Figure 2. Combined with high energy prices and high administration costs this would fall even further to -£30m (the combined high scenario in Figure 2).

55. Although an increase in comfort-taking for low-income households (the higher labelling effect) would reduce present-value benefits of the policy, this is not necessarily representative of the value the policy would have in reality. In the context of rising energy prices and cost of living it is likely that additional warmth has a higher 'value' than modelled in this analysis, and would have a larger positive impact on the NPV. However, we do not have strong empirical evidence from the current context to monetise this, so we have used assumptions consistent with previous WHD Impact Assessments.

Figure 2: Percentage change in equity weighted NPV from changing assumptions in the analysis



5. Small and micro business impact assessment

56. The cost of WHD is a direct cost to business that is recovered by levying the cost of the obligation onto household energy bills. For the 2021/22 scheme year, the supplier obligation threshold was set at 150,000 (across Great Britain). For the 2022/23 England and Wales WHD scheme, suppliers will be obligated for the whole scheme if they have a GB-wide domestic market share of 50,000 or more domestic customer accounts. From 2023/24 that threshold will reduce to 1,000 domestic customer accounts. As outlined in the government response to the WHD Scotland consultation, the level of obligation for WHD Scotland will also be set based on suppliers' GB market share as outlined above. If the obligation were set based on market shares in the different nations it would have a distorting effect.

5.1 Impacts on suppliers

57. According to data from January 2022³⁰, the current threshold of 150,000 means that 98.9% of the market would be obligated to provide the WHD, increasing to 99.6% when the threshold reduces to 50,000. The reduction in threshold would affect four suppliers.
58. We recognise that there are differences in the proportions of customers suppliers have in the different nations. Due to the differences between the schemes and the consequent impact on delivery costs, it would not be possible to achieve perfect parity in the burden placed on suppliers. There will be challenges for suppliers with a high proportion of customers in Scotland as there will be for those with a smaller proportion. Therefore, we will make allowances for these differences in setting the non-core obligation. Suppliers will be able to transfer up to 100% of their Broader Group target to Industry Initiatives, subject to Ofgem approval. Ofgem's consideration of applications for flexibility will mainly be based on suppliers' market shares in Scotland relative to GB. Further details are set out in the government response that this analytical annex accompanies.
59. We recognise that there will be administration costs faced by energy suppliers, particularly for administering two different schemes in England & Wales and Scotland. We have made a simplifying assumption for the impact analysis presented in this document, that administration costs faced by suppliers for the Scottish scheme will be 10% of the GB scheme. This is based on the rough proportion of rebates issued in Scotland. However, we do expect suppliers' administration costs for the England & Wales to reduce with the reforms this year, as the automatic rebate distribution will be easier to administer than the previous Broader Group. This was discussed in section 8 of the WHD Final Impact

³⁰ Ofgem data, based on number of meter points provided by network operators as at January 2022

Assessment for England & Wales³¹. Therefore, we expect this reduction will offset any increases in costs due to administering two different schemes.

5.2 Consumer impacts of reducing the threshold

60. For consumers receiving the WHD, the threshold currently disincentivises switching to an unobligated supplier, as those who are eligible would have to judge whether switching to a tariff from an unobligated supplier would offset the loss of WHD, which may create confusion. In 2019, Ofgem found that despite the overall switching rate increasing over time, those who received the WHD were the least likely of all customer groups to engage in the energy market³². Government believes that all consumers should benefit from good value and innovative deals and not face additional barriers to engaging with the energy market. Reducing the obligation threshold encourages rebate recipients to participate in the energy market as more suppliers are participating in the WHD scheme.
61. There are potential benefits to consumers from competition on a level playing field. For example, competition is likely to cause prices to fall to those of the lower cost suppliers. However, the scale of this is difficult to assess.

³¹ www.gov.uk/government/consultations/warm-home-discount-better-targeted-support-from-2022

³² Ofgem, Consumer Engagement Survey 2019, Slide 34, www.ofgem.gov.uk/publications-and-updates/consumer-survey-2019

6. Monitoring and evaluation

6.1 Evaluation

62. A process and impact evaluation of WHD was conducted in 2017, covering scheme delivery between 2010 and 2015³³. Given this substantial evaluation, BEIS has decided that conducting an additional impact evaluation would not be proportionate, as was also outlined in the Final Impact Assessment for the England and Wales WHD³⁴. Instead, BEIS intends to conduct a process and outcomes evaluation of the reformed England and Wales scheme. As part of this evaluation, we intend to capture relevant aspects of WHD Scotland, for example the experience of and costs to energy suppliers of administering two schemes: one for England and Wales and another for Scotland. We would not intend to capture evidence from Scottish rebate recipients, given that the scheme will be administered in the same way as the GB scheme that was evaluated in 2017.

6.2 Monitoring

63. As also outlined in the Final Impact Assessment for the England and Wales WHD, and subject to receiving data in a suitable format, BEIS intends to publish Official Statistics showing the characteristics of rebate recipients at an aggregate level. The WHD Scotland Core Group would be included in these statistics. It will not be possible to include the WHD Scotland Broader Group given Broader Group rebates will be issued via customer applications to energy suppliers, and detailed data on these customers' characteristics would not be available to BEIS. High level data on the Broader Group, as well as other Management Information would be included in Ofgem's annual reports on the WHD scheme.

³³ www.gov.uk/government/publications/warm-home-discount-evaluation-2010-to-2015

³⁴ www.gov.uk/government/consultations/warm-home-discount-better-targeted-support-from-2022

Annex: Equity weights

The Warm Home Discount scheme is redistributive, transferring income from all billpayers (those from participating suppliers) to low income and vulnerable households. Equity weighting is founded on the principle that relatively poor households put a greater value on a unit of additional income than relatively rich households.

The equity weighting used below is based on the guidance published in the HM Treasury Green Book.

$$\text{Equity weight for each decile} = \left(\frac{\text{Median Income of total population}}{\text{Median income of income decile}} \right)^{1.3}$$

Table 5: Equity weights used in economic appraisal

Income decile (where 1 is lowest)	Decile Median of After Housing Costs Income Equivalised (£)	Equity weight
1	6,500	5.28
2	11,700	2.44
3	15,100	1.74
4	18,300	1.36
5	21,600	1.10
6	24,900	0.91
7	29,000	0.75
8	33,900	0.61
9	41,700	0.47
10	61,600	0.28

Where an income decile of 1 is the lowest, and 10 is the highest.

Figures based on the English Housing Survey 2017/18

AHC equivalised incomes rounded to nearest £100.

Calculated in line with:

HM Treasury, The Green Book (2022), 'Distributional Appraisal' Page 98

www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government

This publication is available from:

www.gov.uk/government/consultations/warm-home-discount-scotland

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