

## A review of the second year of the Carbon Emissions Reduction Target

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**Target Audience:** DECC, energy suppliers, the energy efficiency industry and any other interested parties

### Overview:

The Carbon Emissions Reduction Target 2008-2011 (CERT) requires certain gas and electricity suppliers to meet a carbon emissions reduction target in domestic properties.

Throughout the course of the second year of the CERT programme the suppliers were working towards the 2008-2011 target of 185 million lifetime tonnes of carbon dioxide. This report is therefore based on suppliers' activity towards meeting this target, as opposed to the new target in the CERT Extension Order.

By the end of the second year of CERT (March 2010) suppliers had delivered sufficient energy saving measures to meet around 80% of the overall target of 185 million lifetime tonnes of carbon dioxide.

Suppliers are required to meet at least 40% of their obligation in the Priority Group (those on certain benefits or over 70 years of age). During the first two years of the programme suppliers have focused almost half of their activity in this group.

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## Context

The Carbon Emissions Reduction Target 2008-11 (CERT) is the main legislative driver for improving the energy efficiency of existing households in Great Britain. It requires licensed gas and electricity suppliers that have 50,000 domestic customers or more (either individually or as part of a group of companies) to meet a carbon emissions reduction obligation.

The CERT 2008-11 is primarily a carbon reduction target which contributes to the UK's legally binding emissions reductions commitments. At least 40 per cent of the target has to be met in relation to certain low income consumers (who are on certain benefits) or those over 70 years old. The CERT therefore also contributes towards alleviating fuel poverty.

The Department of Energy and Climate Change (DECC) set the overall target for CERT. Ofgem administers the programme, determining the carbon emissions reduction obligation for each supplier and monitoring compliance.

Following a consultation by DECC which ended in March 2010, legislation to restructure and extend the CERT to December 2012 was made in July 2010. During the extension period, suppliers will be required to achieve a revised overall target. This will incorporate the existing 40 per cent Priority Group target and new targets to focus activity on insulation measures and to ensure the most vulnerable households receive measures.

This report sets out the suppliers' performance during the first and second years of CERT. It fulfils Ofgem's reporting duties to the Secretary of State under The Electricity and Gas (Carbon Emissions Reduction) Order 2008 and The Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009 (together referred to as 'the Order').

## Associated Documents

- The Electricity and Gas (Carbon Emissions Reduction) Order 2008, Statutory Instrument 2008 No. 188.
- Explanatory Memorandum to the Electricity and Gas (Carbon Emissions Reduction) Order 2008, 2008 No.188.
- The Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009, Statutory Instrument 2009 No. 1904.
- Explanatory Memorandum to the Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009, 2009 No. 1904.
- A review of the first year of Carbon Emissions Reduction Target, 1 August 2009
- Carbon Emissions Reduction Target (CERT) 2008-11 Supplier Guidance V2, 31 January 2008.

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## Summary

This report fulfils Ofgem's reporting duties to the Secretary of State for Energy and Climate Change under The Electricity and Gas (Carbon Emissions Reduction) Order 2008 as amended by The Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009. In addition to reporting the overall performance and each supplier's performance, as required, we have provided extra analysis on the level of activity within the Priority Group (see Chapter 5), as well as charts indicating each supplier's EEC2 carryover measure mix (see Appendix 2).

Throughout the course of the second year of the CERT programme the suppliers were working towards the CERT 2008-11 target of 185 MtCO<sub>2</sub>. As this report sets out the suppliers' performance up until the second year of CERT (March 2010), we have conducted our analysis against the 185 MtCO<sub>2</sub> target as opposed to the new target in the CERT extension Order.

Six suppliers were set an obligation under the CERT 2008-11: British Gas, EDF Energy, E.ON, npower, Scottish Power and Scottish and Southern Energy. Suppliers meet their obligations by setting up schemes to promote and deliver energy efficiency measures to domestic customers. To date, Ofgem has received around 185 scheme submission notifications from obligated suppliers, of which 132 have formal approval. Outlined below are the key findings of the report.

### Overall CERT progress

#### Overall CERT progress including EEC2 carryover

- At the end of the second year of CERT the suppliers combined had achieved 81 per cent of the overall target.
- Activity levels and the mix of measures promoted in Year 2 have remained broadly consistent with Year 1
- Priority Group carbon savings accounted for 43 per cent of total carbon savings
- Supplier activity in the Priority Group has been dominated by insulation measures, with lighting also featuring strongly. In the non-Priority Group, again insulation accounted for the highest share of carbon savings achieved, although in this group it was more closely followed by lighting.

#### Overall CERT progress excluding EEC2 carryover

- Insulation measures accounted for 60 per cent of the carbon savings achieved in the first two years
- Lighting, in particular compact fluorescent lamps (CFLs), make up a significant proportion of the carbon savings achieved to date at around 31 per cent
- Of the activity to date, 47 per cent has been in the Priority Group

## Each supplier's progress towards its obligation

The table below shows each supplier group's achieved carbon savings as a percentage of their individual obligations. It also shows the share of carbon savings carried over from EEC2, as a percentage of each supplier's group CERT obligation.

Supplier	Proportion of each Supplier's CERT obligation				Total
	Priority Group	non-Priority Group	EEC2 carryover - Priority Group	EEC2 carryover - non-Priority Group	
British Gas	24 per cent	33 per cent	7 per cent	17 per cent	80 per cent
E.ON	34 per cent	32 per cent	6 per cent	9 per cent	82 per cent
EDF Energy	33 per cent	28 per cent	6 per cent	14 per cent	84 per cent
npower	32 per cent	36 per cent	3 per cent	6 per cent	77 per cent
Scottish and Southern Energy	24 per cent	30 per cent	8 per cent	16 per cent	78 per cent
Scottish Power	29 per cent	32 per cent	11 per cent	14 per cent	87 per cent
Overall target	28 per cent	32 per cent	7 per cent	14 per cent	81 per cent

## Delivery of measures

Suppliers meet their CERT obligations by promoting energy efficiency measures to domestic households. As a mechanism, CERT encourages suppliers to do this in the most cost effective way, as the costs of the programme are assumed to be passed on to consumers via their energy bills. DECC estimate that the current CERT 2008-11 programme, based on the 185 MtCO<sub>2</sub> target, will cost suppliers around £3.2 billion. This equates to a cost of around £17 per lifetime tonne of carbon dioxide or an average annual supplier cost per consumer dual fuel energy bill of approximately £41 to March 2011 (DECC estimate).

Suppliers have continued to deliver their CERT programmes in a variety of ways. Primarily this has involved working with installers to offer consumers energy efficiency measures, such as insulation. Many of these measures are subsidised by the energy suppliers with measures to the Priority Group typically being offered for free. Suppliers have also developed partnerships with, and promoted measures through, Social Housing Providers (SHPs), Local Authorities, charities, retailers, manufacturers, newspapers and linked with other government programmes such as the Warm Front Scheme. As in the first year of CERT, insulation and lighting measures dominate the carbon savings achieved.

In addition suppliers have continued to promote other, innovative, measures including consumer electronics, microgeneration products, and shower regulators which save hot water and hence energy and carbon. A number of demonstration action proposals have been submitted with some of those submitted in the first year now coming close to completion. This activity, however, makes up a small share of the overall activity carried out by suppliers.

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## 1. Introduction

1.1. The Carbon Emissions Reduction Target 2008-11 requires certain gas and electricity suppliers to achieve a carbon emissions reduction target between 1 April 2008 and 31 March 2011. The overall target is set at 185 million lifetime tonnes of carbon dioxide (MtCO<sub>2</sub>).

1.2. At least 40 per cent of the target has to be met in relation to Priority Group consumers, who are defined as those in receipt of certain income-related benefits, or those over 70 years of age. The overall obligation is set by DECC. Ofgem is required to administer the programme.

1.3. More recently the CERT has been extended out to December 2012 with the overall target being increased. However, throughout the course of the second year of the CERT programme, the suppliers were working towards the CERT 2008-11 target of 185 MtCO<sub>2</sub>. As this report sets out the suppliers' performance up until the second year of CERT (March 2010), we have therefore conducted our analysis against the 185 MtCO<sub>2</sub> target as opposed to the new target in the CERT extension Order. Any reference to the CER target is 185 MtCO<sub>2</sub>, unless specified differently.

1.4. For each year of the CERT programme, Ofgem is required to provide a report to the Secretary of State. Chapters 2 and 3, which detail suppliers' overall progress towards the target and their individual progress towards their obligations, including the Priority Group, meet this requirement. Chapter 4 covers the measures delivered during the first and second year with Chapter 5 focussing on our analysis of the programme so far.

1.5. Carbon savings accredited under CERT are derived from a number of different sources depending on the measure involved. The methodology used for the setting of the target is the same as that used for supplier reporting. Insulation and heating measures are tested by independent test houses, such as those accredited by UKAS, and are based on the BRE Domestic Energy Model, BREDEM. The BREDEM has been developed over a number of years and its results have been compared to physical tests of measures installed in situ. The actual carbon savings for any individual household will depend on the number of hours and temperature to which householders heat their homes.

1.6. Appliance and lighting carbon savings are dependent on the difference in consumption between the energy saving product, the alternative product and consumer usage patterns that have been monitored by the Energy Saving Trust (EST) and the Market Transformation Group. These sources ensure that the best available data is being used to monitor the supplier activity. The carbon saving or 'score' awarded to an energy efficiency measure, along with a lifetime which is based on both physical product characteristics and behavioural expectations, provides the estimated reduction in carbon dioxide emissions of a measure over its lifetime. This document presents achieved carbon savings for measures which have been promoted under CERT based on these scores.

1.7. Suppliers provide quarterly reporting data to Ofgem on the carbon savings and measure numbers (on main measure types) achieved to date from approved schemes (note this excludes unapproved schemes and also excludes forecasted carbon savings). Ofgem carries out checks on the data, liaising with the suppliers over unexpected data points or trends. At the end of the year we conduct a reconciliation process, asking suppliers to re-confirm the submitted quarterly data, before the data is published in the Annual Report. Where numbers provided in the tables do not exactly match those cited in the text it is due to rounding errors.

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## 2. Overall progress in the first two years

### Chapter Summary

This chapter outlines the suppliers' combined progress against the overall target during the first two years of CERT, focusing on the carbon savings achieved. The chapter also discusses the progress suppliers have made towards achieving at least 40 per cent of the overall target in the Priority Group.

The information presented in this chapter is based on suppliers' approved scheme submissions and quarterly report returns.

This chapter fulfils Ofgem's reporting duties to the Secretary of State on overall progress towards the carbon emissions reduction target.

### Measures carried forward from EEC2

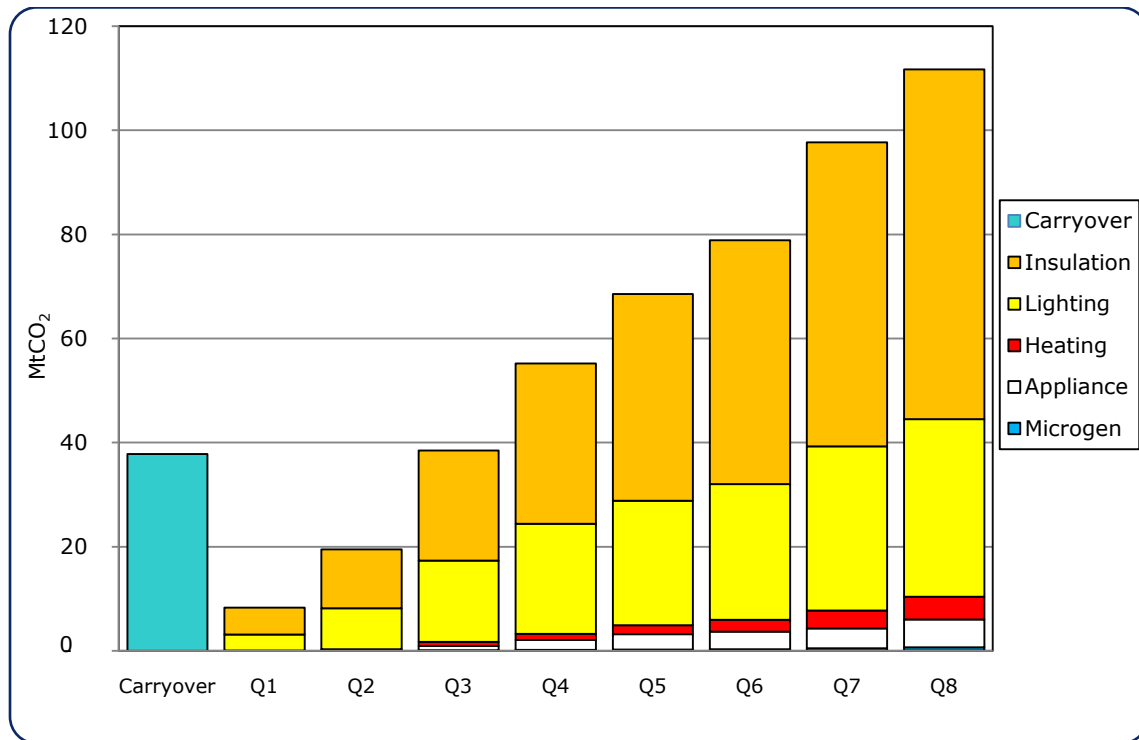
2.1. As reported in the 2009 Annual Report, suppliers carried over carbon savings from EEC2 into CERT of 37.8 MtCO<sub>2</sub>, accounting for around 20 per cent of the CER target of 185 MtCO<sub>2</sub>.

### Progress to the end of the second year

2.2. By the end of the second year, suppliers had delivered measures resulting in carbon savings of approximately 149 MtCO<sub>2</sub> or 81 per cent of the overall target. Of this - 37.8 MtCO<sub>2</sub> was carried over from EEC2, 55 MtCO<sub>2</sub> was achieved in the first year of the programme, and 56 MtCO<sub>2</sub> was achieved in the second year of the programme.



Figure 2.1. Carbon emissions savings achieved to the end of the second year of CERT



2.3. Figure 2.1 shows the cumulative carbon savings achieved quarter on quarter in the first two years of CERT, broken down by main measure type. There has been a steady progression towards the target from the start of CERT. Insulation delivery has been broadly constant each quarter, and remains the measure type delivering the greatest carbon savings. The rate at which carbon savings are achieved from lighting measures has dropped since the start of the second year of CERT, although this remains the second most significant measure.

## Measures delivered

2.4. Supplier activity can be broken down into five main categories of measure: insulation, lighting, heating, microgeneration and appliances. Figure 2.2 shows how the delivered carbon savings are attributed to these main types, with a separate segment for the carbon savings carried over from EEC2. Table 2.1 presents these carbon savings as percentages, split between the first and second year of CERT, as well as EEC2 carryover.

2.5. Of CERT activity in the first two years (excluding EEC2 carryover), insulation and lighting dominate, accounting for 91 per cent of the carbon savings achieved. Insulation accounts for 60 per cent of carbon savings achieved, therefore representing the largest share of carbon savings.

2.6. When the carbon savings achieved in the second year of CERT are compared to those from the first year, the proportion of the total from lighting activity has dropped. The proportion from insulation however has remained broadly consistent, albeit rising slightly. Carbon savings from heating measures, appliances and microgeneration have all increased proportionally in the second year.

2.7. The drop in the rate of take up from lighting measures can be attributed to restrictions on direct (free) CFL lighting schemes imposed through the CERT amendment Order. As a result, suppliers wound down direct lighting activity between 21 July 2009 and 31 December 2009, with all direct lighting activity being completed before the start of 2010, when it became ineligible.

Figure 2.2. Achieved carbon emissions savings by measure type

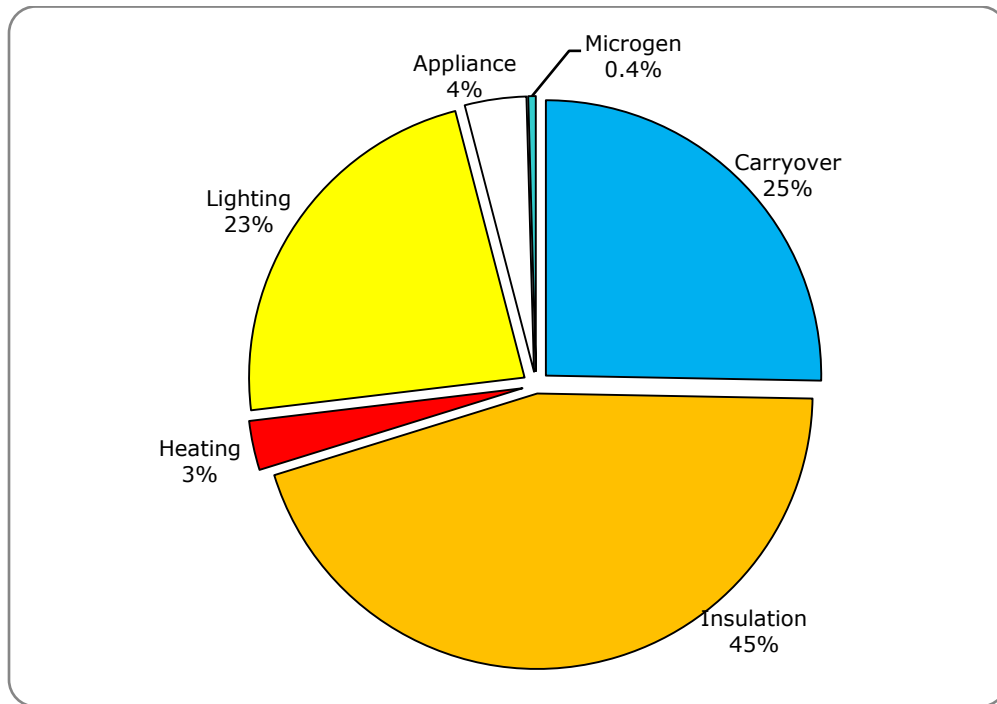


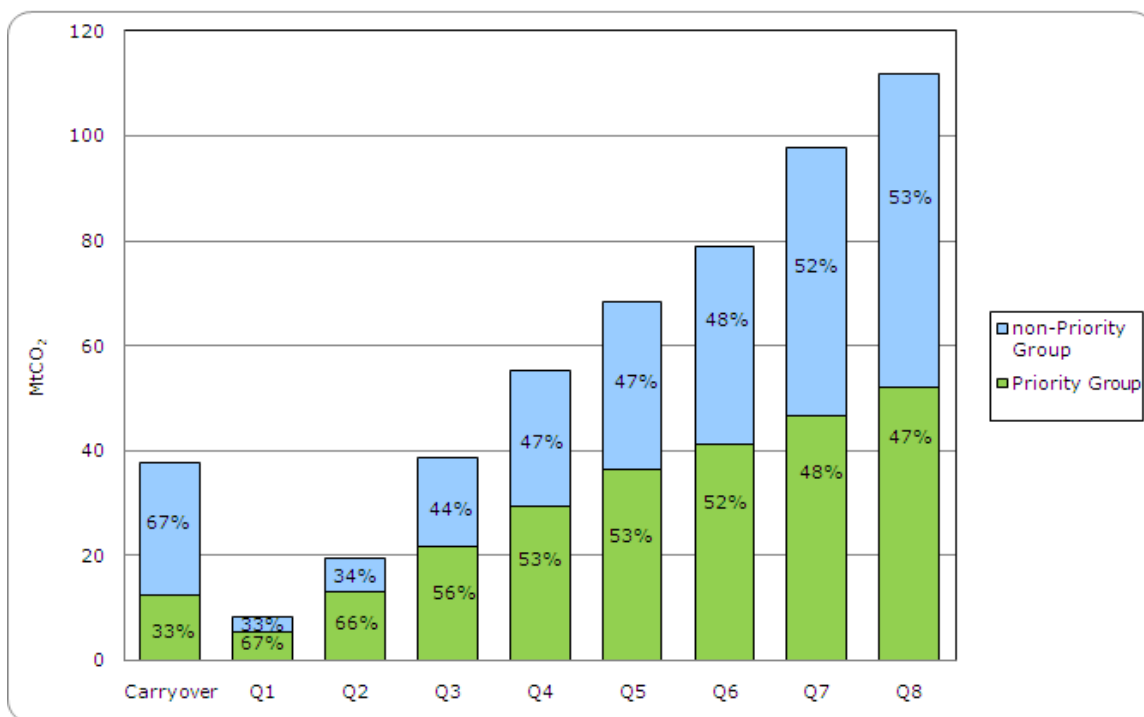
Table 2.1. Carbon emissions savings by measure type and year as a percentage of total carbon savings achieved

Measure	Carryover	CERT year 1	CERT year 2
Insulation	17.4%	20.6%	24.3%
Heating	2.8%	0.8%	2.1%
Lighting	5.1%	14.2%	8.7%
Appliance	0.041%	1.3%	2.3%
Microgen	0.003%	0.1%	0.3%

## The Priority Group

2.8. Of the total carbon savings achieved by the end of the second year of CERT (including EEC2 carryover), 43 per cent resulted from measures installed in, or provided to, the Priority Group households. This equates to around 65 MtCO<sub>2</sub>. This is above the minimum 40 per cent required by the legislation and indicates that the suppliers are on target to meet their Priority Group obligations. The remaining 57 per cent resulted from measures promoted to non-Priority Group households.

Figure 2.3. Achieved carbon emission savings by consumer type, split by Priority Group and non-Priority Group



2.9. Figure 2.3 shows the breakdown of carbon savings achieved in the first two years of CERT (including EEC2 carryover), split by the Priority Group and the non-Priority Group. From this, it can be seen that by the end of the second year of CERT, carbon savings achieved in the Priority Group (excluding EEC2 carryover) accounted for 47 per cent of the carbon savings achieved to date. The Priority Group carbon savings have not shown the same rate of increase each quarter as the non-Priority Group. This is due to Priority Group activity being achieved at a faster rate in the first year of CERT than the second year. Activity in the non-Priority Group was achieved at a more consistent level in both years of CERT.

2.10. Figure 2.4 shows the proportion of carbon savings achieved at the end of the second year of CERT, by measure type, and split between Priority Group and non-Priority Group. Table 2.2 shows these carbon savings as percentages. Figure 2.4 shows insulation carbon savings are evenly split between the Priority and non-

Priority Groups. It can be seen that higher levels of lighting carbon savings were achieved in the non-Priority Group than the Priority Group. For heating measures, appliances and microgeneration, over 70 per cent of the total carbon savings were delivered to the non-Priority Group.

Figure 2.4 Achieved carbon emissions savings by measure type and consumer type

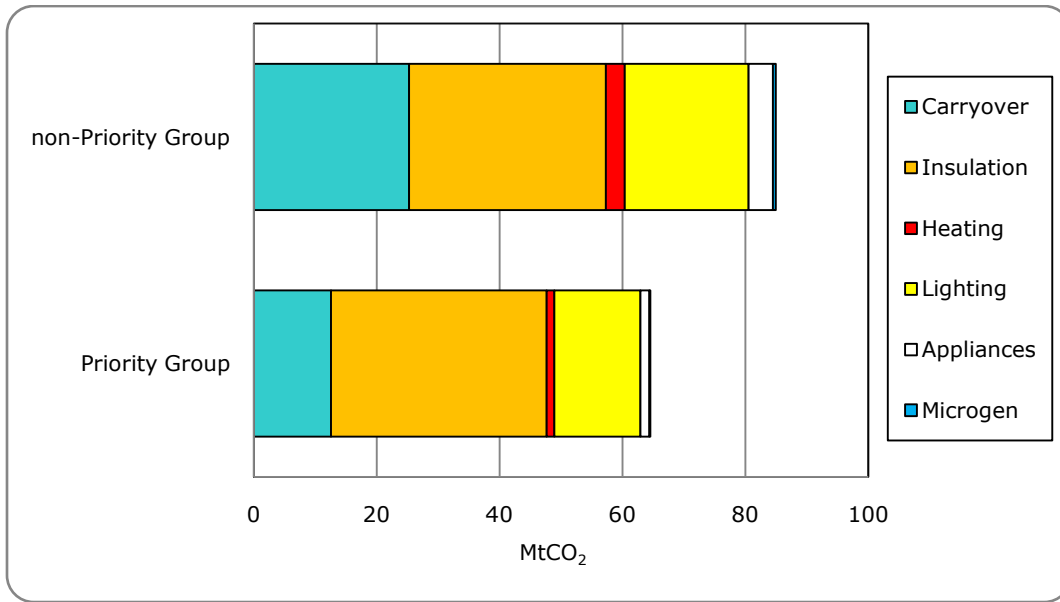


Table 2.2. Carbon emissions savings in the Priority Group and non-Priority Group as a percentage of total carbon savings achieved

Group	EEC2 Carryover	Insulation	Lighting	Appliances	Heating	Microgen & CHP	Total
Priority Group	8.4 per cent	23.5 per cent	9.4 per cent	1.0 per cent	0.8 per cent	0.1 per cent	43.2 per cent
non-Priority Group	16.9 per cent	21.4 per cent	13.5 per cent	2.6 per cent	2.1 per cent	0.3 per cent	56.8 per cent

## 3. Each Supplier's progress

### Chapter Summary

This chapter documents each supplier's progress to the end of the second year of CERT. The information presented in this chapter is based on the suppliers' schemes and their quarterly report returns.

For each obligated supplier, this chapter presents information on:

- progress towards its CERT obligation by the end of the second year of CERT
- the proportion of carbon savings delivered to the Priority Group by the end of the second year of CERT

Appendix 2 presents each of the suppliers' carbon savings achieved by measure type and EEC2 carryover. The EEC2 carryover measure mix and percentage split are detailed in these charts.

This chapter fulfils Ofgem's reporting duties to the Secretary of State on each supplier's progress towards its carbon emissions reduction obligation, including its Priority Group obligation.

3.1. In 2008 and 2009, six suppliers were set a carbon emissions reduction obligation according to the number of customers on their licences. A list of these obligated licensees is shown in Appendix 1. Ofgem last set obligations for the CERT programme in February 2010. The achieved carbon savings detailed in this chapter have been compared with those obligations.

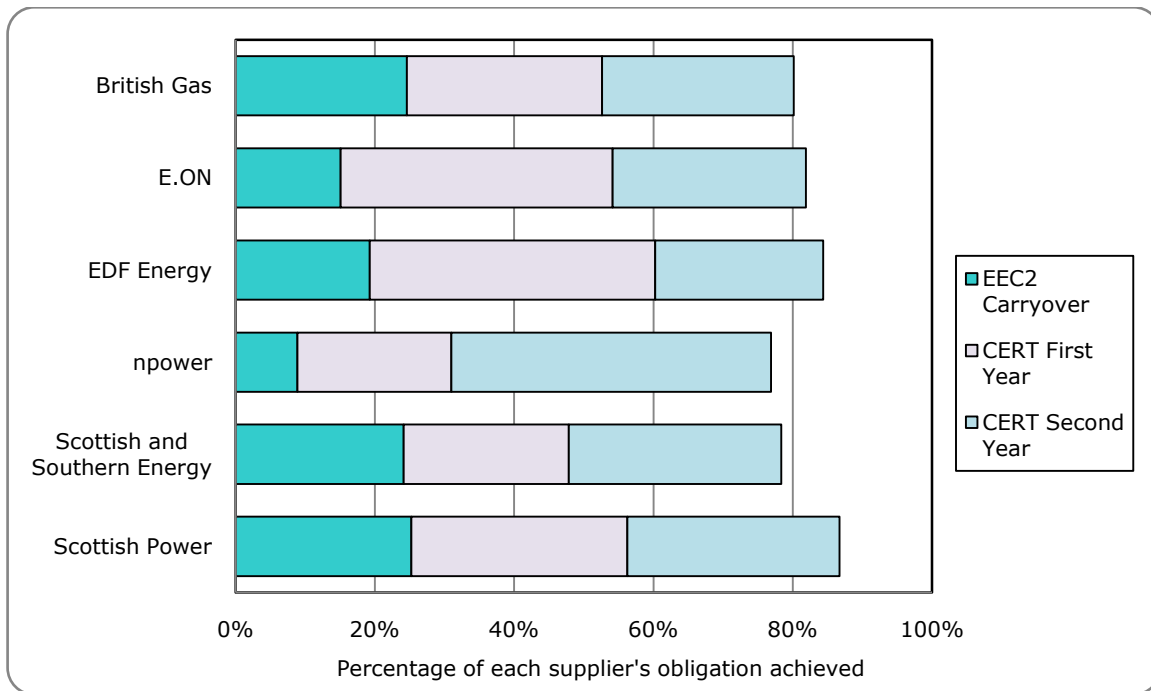
3.2. The suppliers meet their obligations by setting up schemes to promote and deliver reductions in domestic carbon dioxide emissions. The suppliers have flexibility in choosing the measure types that they promote to consumers. Based on a published set of guidelines, Ofgem assesses whether the suppliers' proposals meet the requirements and promote a reduction in carbon dioxide emissions.

3.3. As part of Ofgem's administrative duties, it also monitors each supplier's progress and compliance against their obligation. Ofgem determines for each scheme whether the activity can be considered a qualifying action under the Order, i.e. whether it achieves improvements in energy efficiency and reduces energy consumption.

3.4. Figure 3.1 provides a summary of the achieved carbon savings for each supplier as a percentage of each supplier's total carbon emissions reduction obligation. The achieved carbon savings for each supplier comprise a proportion of carbon savings carried forward from EEC2 and the carbon savings achieved in the first and the second years of CERT.

3.5. It can be seen in Figure 3.1, that all the suppliers have achieved around 80 per cent of their CERT 2008-11 obligations, with Scottish Power the closest to meeting their obligation having achieved 87 per cent. Overall, supplier activity has increased slightly, by 2 per cent, in the second year of CERT, when compared with the first year. Npower achieved the highest level of carbon savings out of all suppliers in the second year of CERT, followed by Scottish Power.

Figure 3.1. Each supplier's achieved carbon emissions savings as percentages of each supplier's total carbon emissions reduction obligation



## British Gas

3.6. As presented in Figure 3.1, British Gas had achieved 80 per cent of its obligation by the end of the second year of CERT. Almost a quarter of British Gas' obligation has been achieved with carbon savings from EEC2 carryover, with an additional 25 per cent being achieved in the first year of CERT. In the second year of CERT, British Gas achieved a further 28 per cent of its obligation. By the end of the second year of CERT, British Gas had 31 scheme proposals approved by Ofgem.

**Achieved savings - progress so far**

Figure 3.2. British Gas - achieved carbon emissions savings by measure type

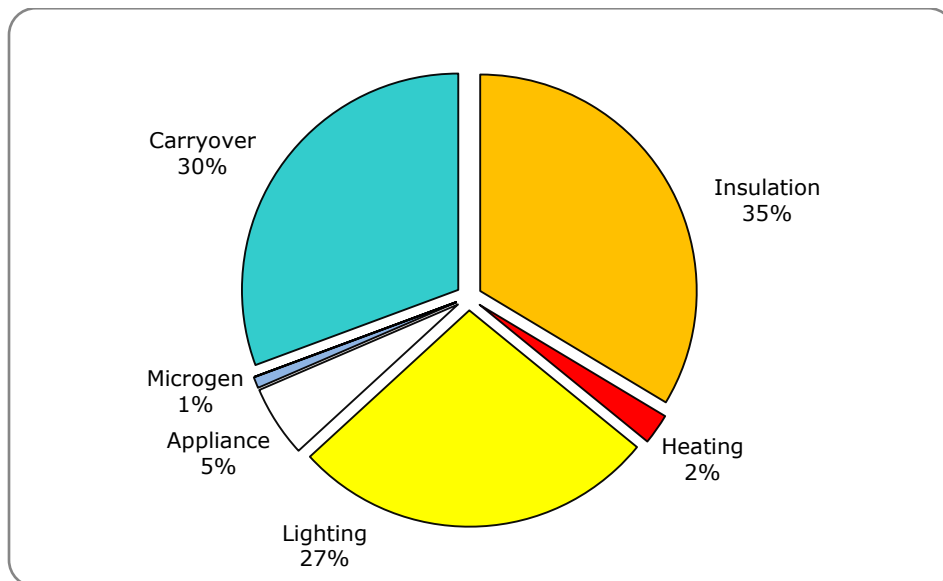


Table 3.1. British Gas - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	18.6%	11.3%	15.7%
Heating	4.1%	0.8%	1.1%
Lighting	1.8%	14.2%	7.7%
Appliance	0.0%	1.6%	2.7%
Microgen	0.0%	0.2%	0.5%

3.7. As presented in Figure 3.2, British Gas has delivered just over a third of its carbon savings through insulation measures, in the first two years of CERT. This was split mainly between loft and cavity wall insulation with British Gas carrying out more loft insulation activity than cavity wall insulation. In addition, DIY loft insulation was promoted in partnership with retailers and some solid wall insulation measures were also promoted but at a low level. Carbon savings from insulation have been achieved through a number of delivery routes including in partnership with social housing providers (SHPs), direct targeting of the owner occupier sector and through retail. As shown in Table 3.1, a slightly greater proportion of carbon savings were achieved from insulation delivered in the second year than in the first year of CERT.

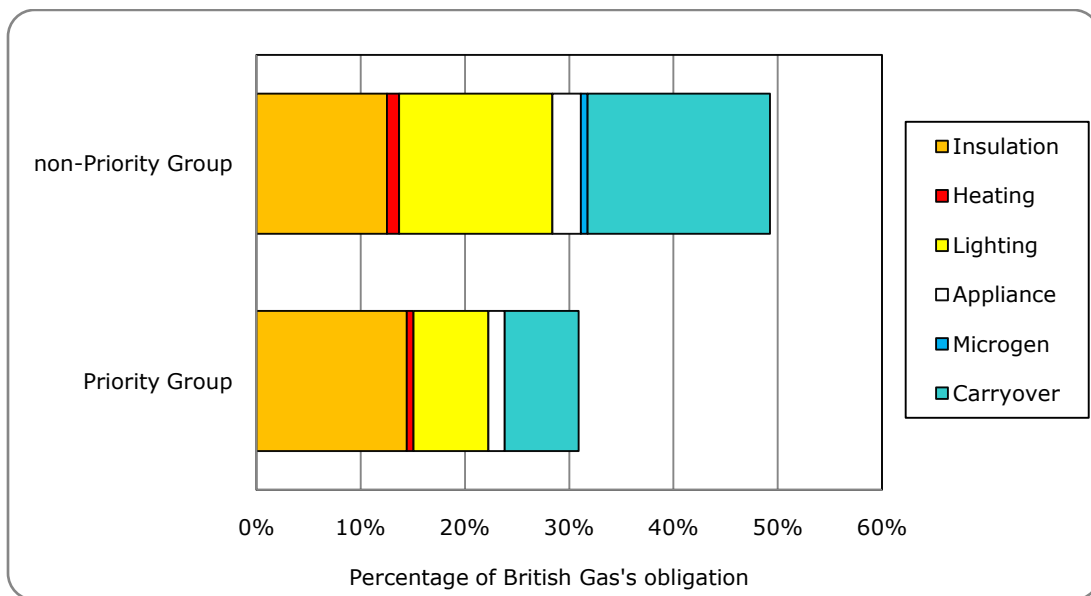
3.8. Carbon savings from lighting measures accounted for 27 per cent of British Gas' carbon savings in the first two years of CERT. Over 60 per cent of its lighting activity in CERT was achieved in the first year of CERT. This was mainly the result of a large giveaway promotion by British Gas to their customer base. British Gas has also promoted lighting through retail partners and SHPs.

3.9. Appliance schemes accounted for 5 per cent of activity to the end of the second year of CERT. Appliance savings were achieved through a number of manufacturer and retail partnerships; high volumes of consumer electronics have been promoted through these routes.

3.10. Heating and microgeneration schemes account for the remainder of British Gas' activity. These carbon savings have been achieved through the switching of households to lower carbon intensive fuels, as well as through the promotion microgeneration such as heat pumps.

**Targeting the Priority Group**

Figure 3.3. British Gas - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.11. As presented in Figure 3.3, British Gas had achieved 31 per cent of its progress towards its carbon emissions obligation in the Priority Group and 49 per cent in the non-Priority Group. Therefore, out of all the suppliers, British Gas has achieved the least amount of carbon savings towards its obligation through the Priority Group and has the largest gap between Priority and non-Priority Group.

3.12. As shown in Figure 3.3, 14 per cent of British Gas's Priority Group obligation had been met through the delivery of lighting and EEC2 carryover; just under half had been achieved through insulation. Carbon savings achieved from heating and appliance measures delivered to the Priority Group accounted for 3 per cent of British Gas' obligation.

3.13. By the end of the second year of CERT, similar amounts of carbon savings from insulation measures had been delivered to both groups. Carbon savings from



lighting were twice as high in the non-Priority Group and microgeneration activity was seen exclusively in the non-Priority Group.

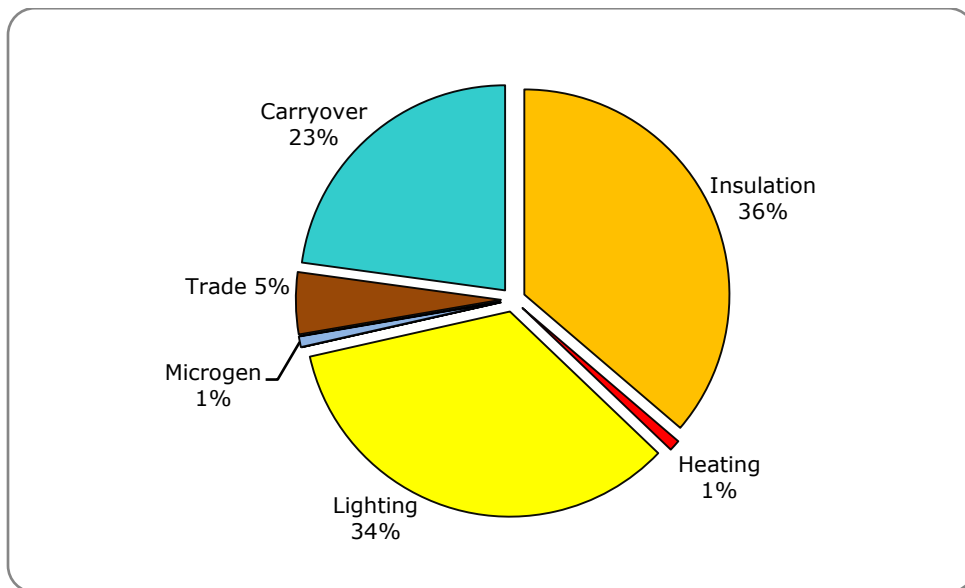
3.14. During the first year of CERT, British Gas traded a small share of their achieved carbon savings to another supplier.

### EDF Energy

3.15. As presented in Figure 3.1, EDF Energy had met 84 per cent of its obligation by the end of the second year of CERT. EDF Energy had achieved the second highest proportion of its overall obligation but carried out less activity in the second year of CERT than the first. This resulted in 24 per cent and 41 per cent of its obligation being met, respectively. By the end of the second year of CERT, EDF Energy had 14 scheme proposals approved by Ofgem.

#### Achieved savings - progress so far

Figure 3.4. EDF Energy - achieved carbon emissions savings by measure type



3.16. As shown in Figure 3.4, 36 per cent of EDF Energy's carbon savings were delivered through insulation in the first two years of CERT. These were split mainly between loft and cavity wall insulation with loft insulation having a slightly higher proportion. These carbon savings were mainly achieved through targeting the owner-occupier sector as well as through partnerships with SHPs. As shown in Table 3.2, carbon savings from insulation were predominately delivered in the first year of the programme. Unlike most other suppliers, excluding Scottish Power, EDF Energy has not promoted DIY loft insulation measures in CERT.

3.17. In the first two years of CERT, a third of carbon savings had been met through lighting. EDF Energy had achieved the highest proportion of lighting activity out of all suppliers. This is a result of a number of promotions through leading retailers, giveaways to their own customer base and partnerships with SHPs and charities.

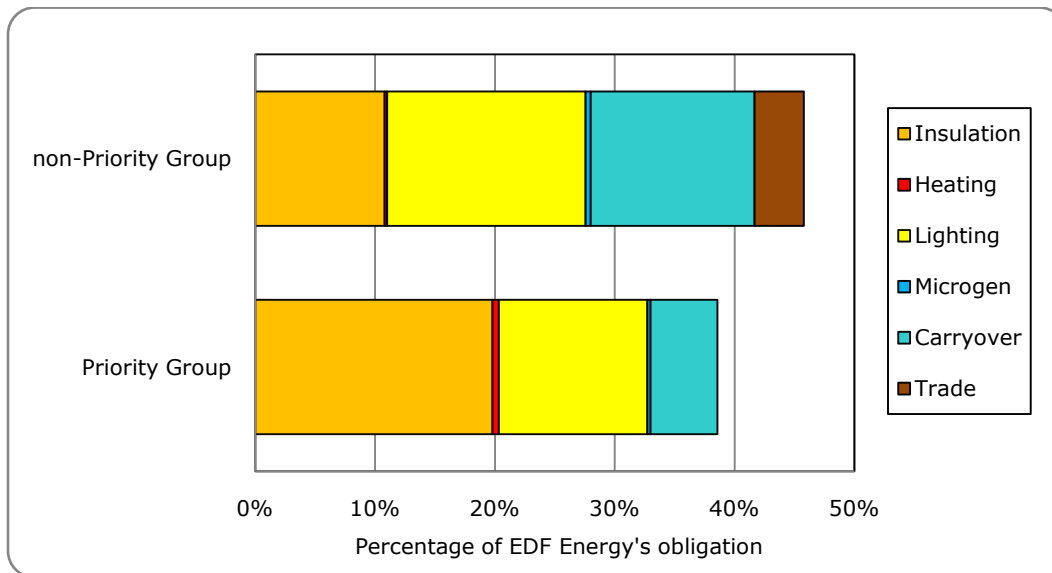
3.18. A very small proportion of carbon savings were met through heating and microgeneration by the second year of CERT. Carbon savings for heating were achieved through partnership with SHPs and microgeneration was delivered through the installation of heat pumps in private households.

Table 3.2. EDF Energy - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	16.0%	22.0%	12.6%
Heating	0.0%	0.0%	0.7%
Lighting	3.3%	18.8%	10.2%
Appliance	0.0%	0.0%	0.0%
Microgen	0.0%	0.1%	0.6%

**Targeting the Priority Group**

Figure 3.5. EDF Energy - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.19. By the end of the second year of CERT, as shown in Figure 3.5, EDF Energy had met 39 per cent of its obligation in the Priority Group, of which half was met through insulation measures. Almost half of EDF Energy's obligation has been achieved in the non-Priority Group, with a quarter of those carbon savings coming from EEC2 carryover.

3.20. The delivery of lighting measures to Priority Group and non-Priority Group consumers accounted for just over a quarter of EDF Energy's overall obligation. Heating and microgeneration made up a small proportion of the overall carbon savings of less than 2 per cent. EDF Energy has not achieved any carbon savings through appliances in CERT.

3.21. During the first year of CERT, EDF Energy bought a small share of achieved carbon savings from another supplier. (marked as 'trade' in Figure 3.4 and 3.5)

## E.ON

By the end of the second year of CERT, E.ON had achieved 82 per cent of its obligation. Almost one sixth of its total obligation has been met through EEC2 carryover, whilst nearly 40 per cent of its overall obligation has been delivered through activity in the first year. A smaller proportion, 28 per cent, of E.ON's obligation has been delivered in the second year of CERT. E.ON had 36 scheme proposals approved by Ofgem by the end of the second year of CERT, the highest number of all the suppliers.

### Achieved savings - progress so far

Figure 3.6. E.ON - achieved carbon emissions savings by measure type

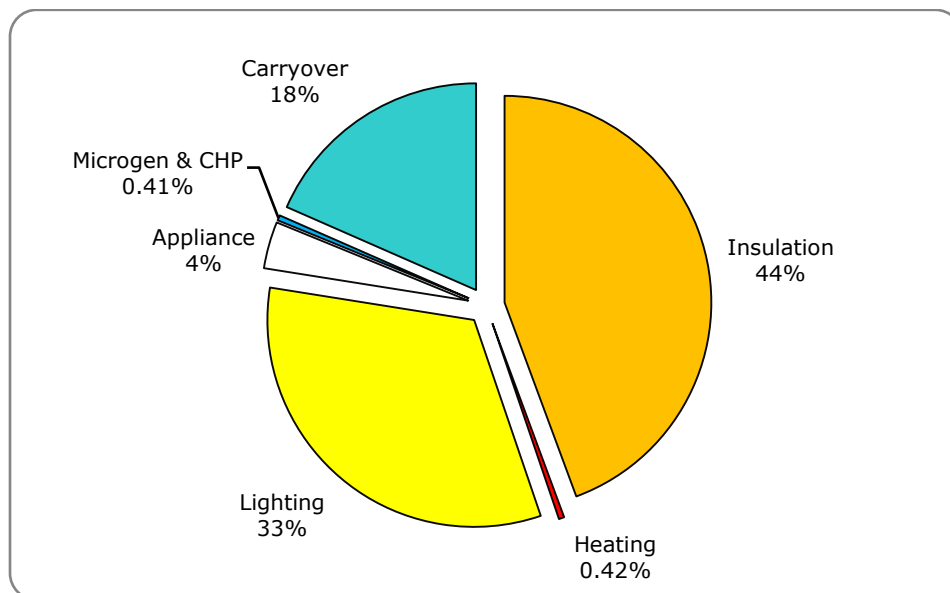


Table 3.3. E.ON - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	0.5%	19.6%	16.7%
Heating	0.9%	0.1%	0.2%
Lighting	13.7%	17.0%	9.8%
Appliance	0.0%	2.2%	0.8%
Microgen and CHP	0.0%	0.2%	0.2%

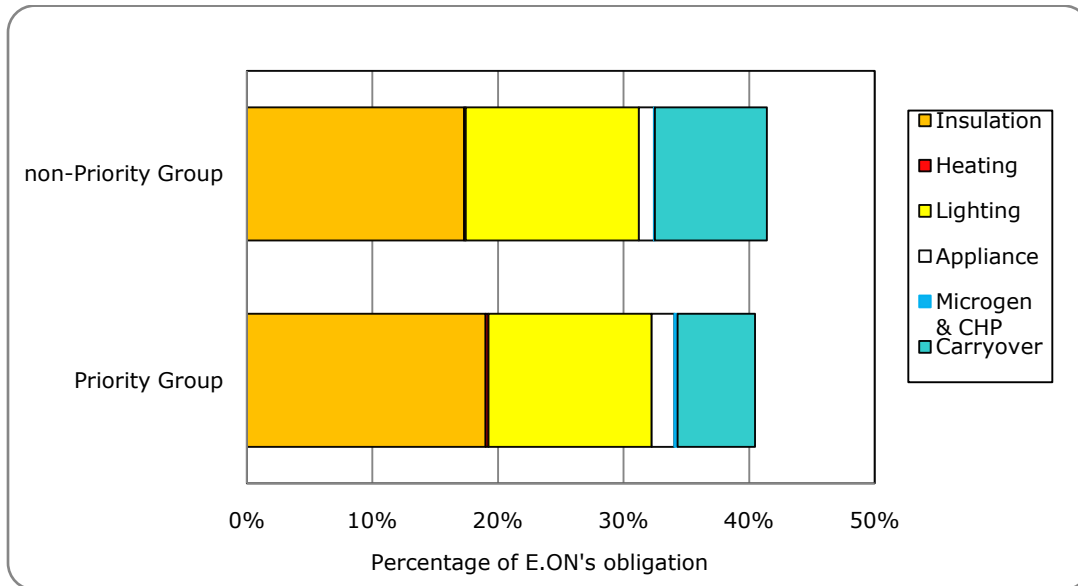
3.22. E.ON had achieved 44 per cent of carbon savings from insulation measures. As shown in Table 3.3, similar proportions of carbon savings from insulation were achieved in Year 1 and in Year 2. To achieve these carbon savings, E.ON delivered loft insulation and cavity wall insulation measures, with loft insulation making up the higher proportion. Carbon savings from insulation have been achieved through targeting the owner-occupier sector as well as through partnerships with SHPs. In line with other suppliers, E.ON also promoted DIY loft insulation measures through retail partnerships.

3.23. Carbon savings achieved through lighting were largely achieved through EEC2 carryover and activity in the first year of CERT. This activity has been delivered in CERT through a number of delivery routes including partnership with leading retailers, giveaway promotions, newspaper promotions and through partnership with SHPs.

3.24. The remainder of E.ON's carbon savings to date have come from promoting energy efficient appliances, heating and microgeneration. The latter two have been achieved by schemes promoting the switching of heating fuels to lower carbon intensive fuel sources and the installation of ground source heat pumps. E.ON has been the only supplier to date to fund a small scale CHP project.

**Targeting the Priority Group**

Figure 3.7. E.ON - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.25. As presented in Figure 3.7, similar proportions of carbon savings have been delivered in the Priority Group and non-Priority Group by E.ON to the end of the second year of CERT. E.ON has achieved, on the basis of its quarterly reports, enough carbon savings to comply with its Priority Group obligation. Carbon savings from insulation and lighting delivered to the Priority Group accounted for 32 per cent of E.ON's obligation.

3.26. Carbon savings from insulation and appliances were marginally higher in the Priority Group, although activity in the non-Priority and Priority Group were similar in their relative proportions.

**npower**

3.27. As presented in Figure 3.1, by the end of the second year of CERT, npower had met 77 per cent of its obligation and therefore has achieved the least amount of its obligation in comparison to the other obligated suppliers. However npower is the supplier who has achieved the highest level of carbon savings in the second year of CERT and is therefore, at current run-rates, well on track to meeting its obligation.

3.28. Only 9 per cent of progress towards its obligation was met through EEC2 carryover. This makes npower the supplier which has met the lowest proportion of its obligation through EEC2 carryover. At the end of the second year of CERT, npower had 15 scheme proposals approved by Ofgem.

**Achieved savings - progress so far**

Figure 3.8. npower - achieved carbon emissions savings by measure type

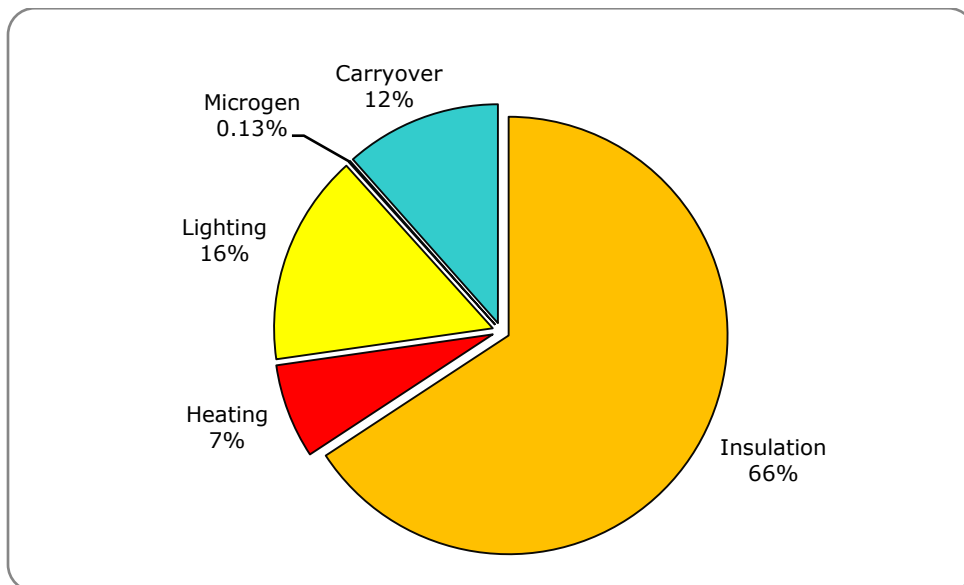


Table 3.4. npower - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	6.5%	19.2%	31.4%
Heating	2.4%	0.4%	5.0%
Lighting	0.0%	2.5%	9.4%
Appliance	0.0%	0.0%	0.0%
Microgen	0.0%	0.0%	0.1%

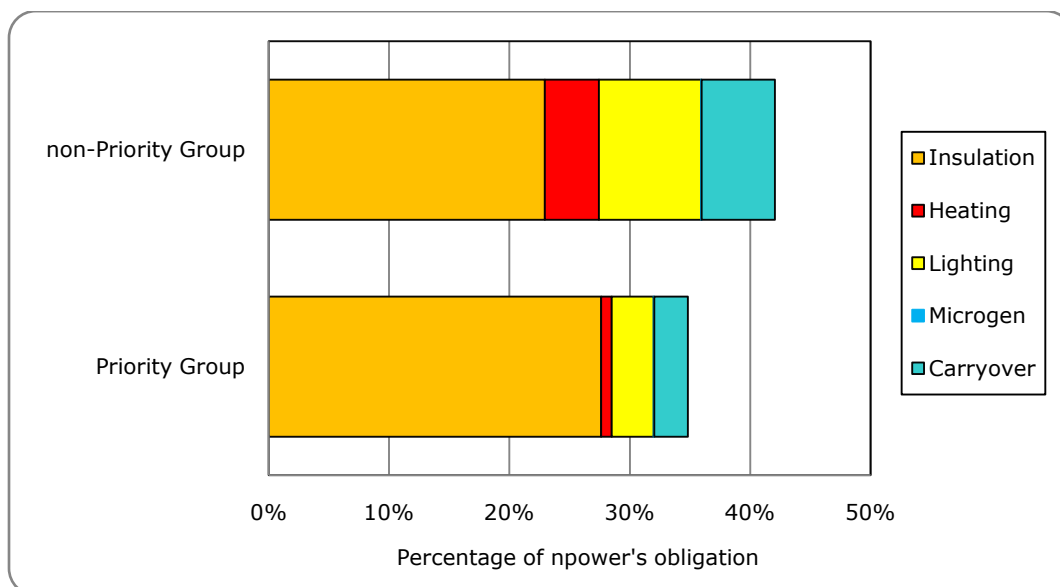
3.29. As presented in Figure 3.8, two thirds (66 per cent) of npower's delivered carbon savings achieved in the first and second years of CERT came from insulation measures, which makes npower the supplier to conduct the highest level of insulation activity in CERT. Table 3.4 shows that the level of this activity increased by 12 per cent in the second year of CERT. Npower have achieved this mainly through cavity wall insulation and loft insulation, with loft insulation achieving the highest proportion. DIY loft insulation was also promoted through a partnership with a manufacturer. A very small number of solid wall insulation measures were installed in the first two years of CERT.

3.30. Lighting measures account for 16 per cent of progress towards its obligation. In the first year of CERT, only a small proportion of carbon savings were achieved in lighting, however after running a direct CFL giveaway scheme to its own customers at the end of 2009, along with partnerships with retailers and SHPs, npower's lighting activity had increased to over 9 per cent in the second year of CERT.

3.31. At 7 per cent, npower along with Scottish Power has achieved the highest level of carbon savings through heating measures. Npower's carbon savings from heating have been achieved through the switching of householders to lower carbon intensive fuels and replacement boilers as well as through the promotion of shower regulators to customers who requested them. No appliance activity has been undertaken and no appliance schemes have been submitted to Ofgem.

**Targeting the Priority Group**

Figure 3.9. npower - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.32. As presented in Figure 3.9, 35 per cent of npower's obligation has been achieved in the Priority Group and just over 40 per cent has been met in the non-Priority Group.

3.33. In the first two years of CERT, over two thirds of insulation activity was achieved in the Priority Group - making npower the supplier to achieve the highest level of insulation activity in this group. As shown in Table 3.4, a greater proportion of insulation activity was conducted in the second year of CERT than the first year.

3.34. EEC2 carryover, lighting and heating measures have been weighted towards the non-Priority Group, with 19 per cent of progress towards npower's obligation being met through this activity, compared with 7 per cent in the Priority Group.

**Scottish and Southern Energy**

3.35. As presented in Figure 3.1, Scottish and Southern Energy (SSE) had achieved 78 per cent of its obligation by the end of the second year of CERT. Just under 25

per cent was achieved in the first year of CERT and 31 per cent achieved in the second year. By the end of the second year of CERT, SSE had 25 scheme proposals approved by Ofgem.

**Achieved savings - progress so far**

Figure 3.10. Scottish and Southern Energy - achieved carbon emissions savings by measure type

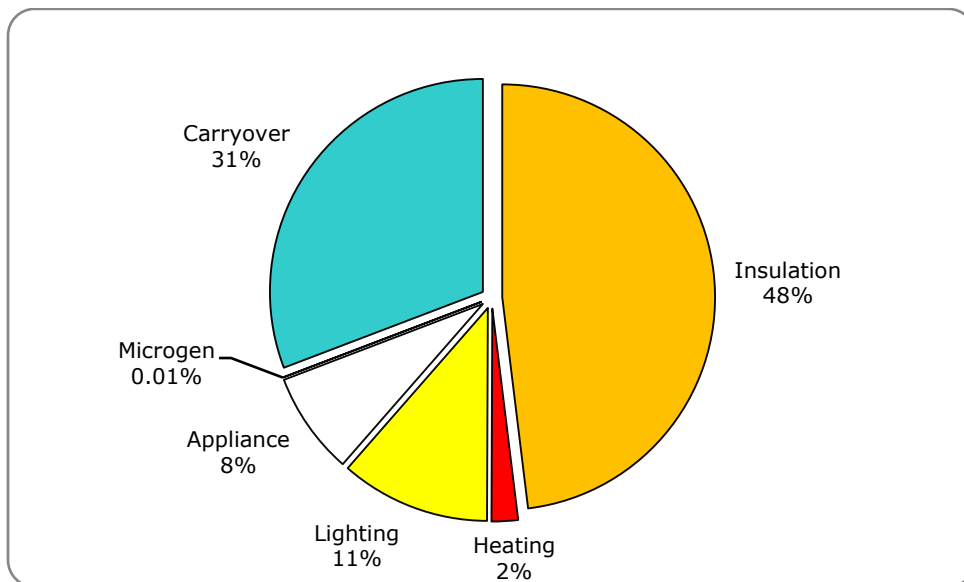


Table 3.5. Scottish and Southern Energy - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	19.5%	14.3%	23.3%
Heating	2.0%	1.0%	0.6%
Lighting	2.5%	7.4%	1.5%
Appliance	0.1%	1.0%	5.1%
Microgen	0.0%	0.0%	0.0%

3.36. Scottish and Southern Energy delivered almost half of its carbon savings from insulation measures, with the majority of the installations conducted in the second year of CERT. This is split mainly between cavity wall insulation and loft insulation, with loft insulation achieving the highest proportion. DIY loft insulation was also promoted in the first two years of CERT. In the first two years of CERT, SSE has achieved the highest level of solid wall insulation activity out of all the obligated suppliers.

3.37. SSE's lighting activity accounted for 11 per cent of its progress so far, with the vast majority of the activity conducted in the first year of CERT. This was achieved



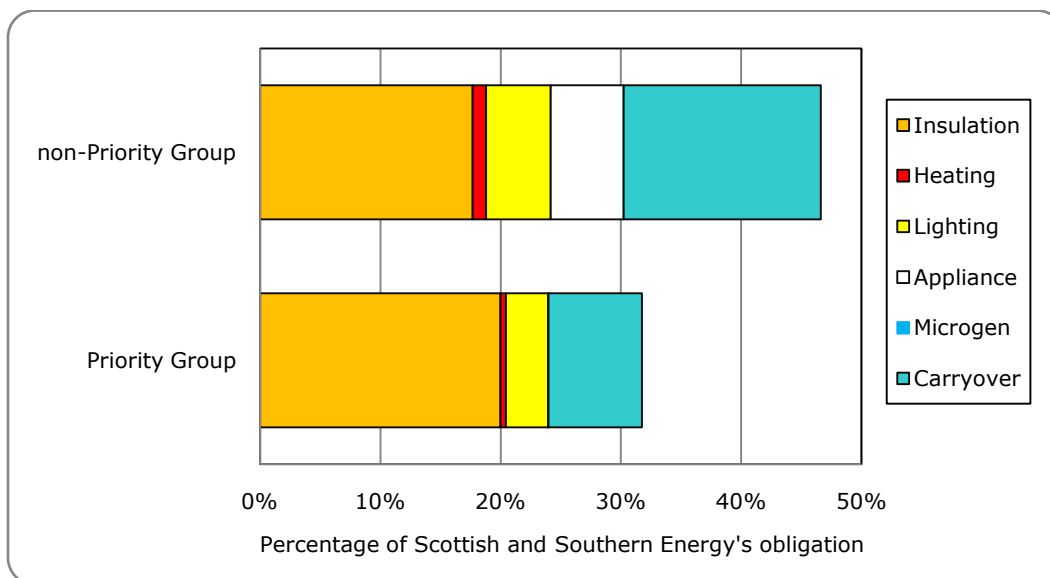
through a number of delivery routes, including SHPs, giveaway promotions and retail partnerships.

3.38. Carbon savings achieved through appliances account for 8 per cent of SSE’s activity to date. At around 6 per cent of their total obligation, SSE is the supplier that has delivered the highest share of its obligation through promotion of these measures. The carbon savings have predominantly been achieved through a number of consumer electronics schemes. The level of carbon savings achieved through appliance measures increased significantly in the second year of CERT.

3.39. Heating and microgeneration schemes accounts for the remainder of SSE's activity. These carbon savings had been achieved through switching of households to lower carbon intensive fuels, as well as small numbers of ground source heat pumps and solar water heating installations.

**Targeting the Priority Group**

Figure 3.11. Scottish and Southern Energy - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.40. As shown in Figure 3.11, SSE's activity up until the end of the second year of CERT towards the overall obligation in the Priority and non-Priority Groups had been split 32 per cent and 47 per cent respectively. EEC2 carryover represents the second largest share of carbon savings in both groups when compared with the proportion of carbon savings achieved in appliance, lighting and heating combined.

3.41. A similar amount of carbon savings from insulation and lighting was delivered in both groups. Carbon savings achieved through appliances were seen exclusively in the non-Priority Group.

## Scottish Power

3.42. As presented in Figure 3.1, Scottish Power only has a small proportion of its obligation left to achieve. A quarter of its obligation had been met through EEC2 carryover with a further 31 per cent through the delivery of measures in the first year of the programme. An additional 30 per cent was achieved in the second year of CERT. Scottish Power is the supplier who has made the most progress towards its obligation. By the end of the second year of CERT, Scottish Power had 5 scheme proposals approved by Ofgem, the fewest of any supplier.

### Achieved savings - progress so far

Figure 3.12. Scottish Power - achieved carbon emissions savings by measure type

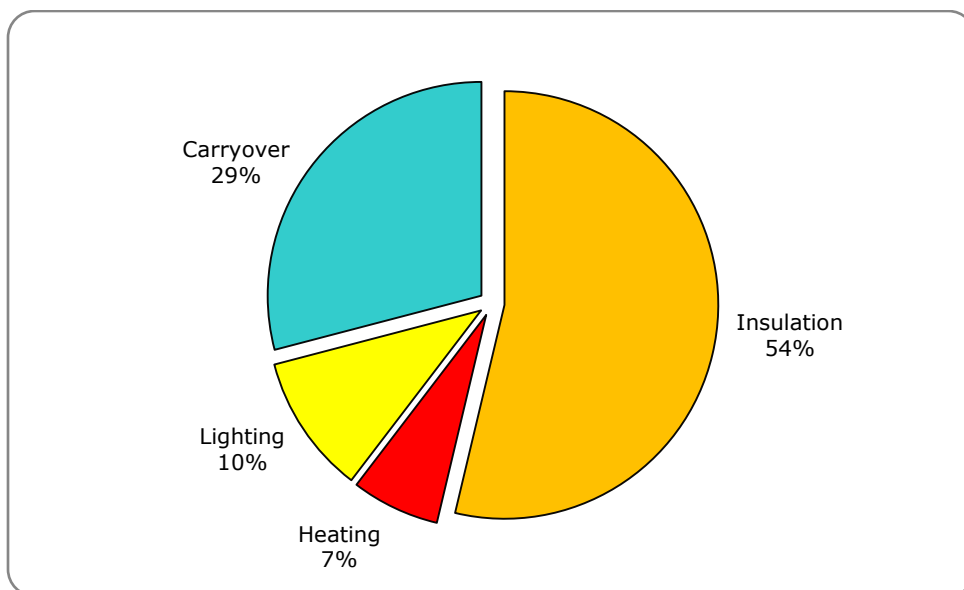


Table 3.6. Scottish Power - achieved carbon emissions savings as a percentage of its obligation

Measure	Carryover	CERT Year 1	CERT Year 2
Insulation	18.3%	24.3%	22.2%
Heating	1.2%	1.2%	4.6%
Lighting	5.8%	5.5%	3.6%
Appliance	0.0%	0.0%	0.0%
Microgen	0.0%	0.0%	0.0%

3.43. As presented in Figure 3.12, insulation measures installed in the first two years of CERT account for the majority of carbon savings achieved by Scottish Power. This is split mainly between cavity wall insulation and loft insulation, with cavity wall insulation achieving the highest share. Out of all the obligated suppliers, Scottish Power is the only supplier to have delivered more cavity wall insulation installations

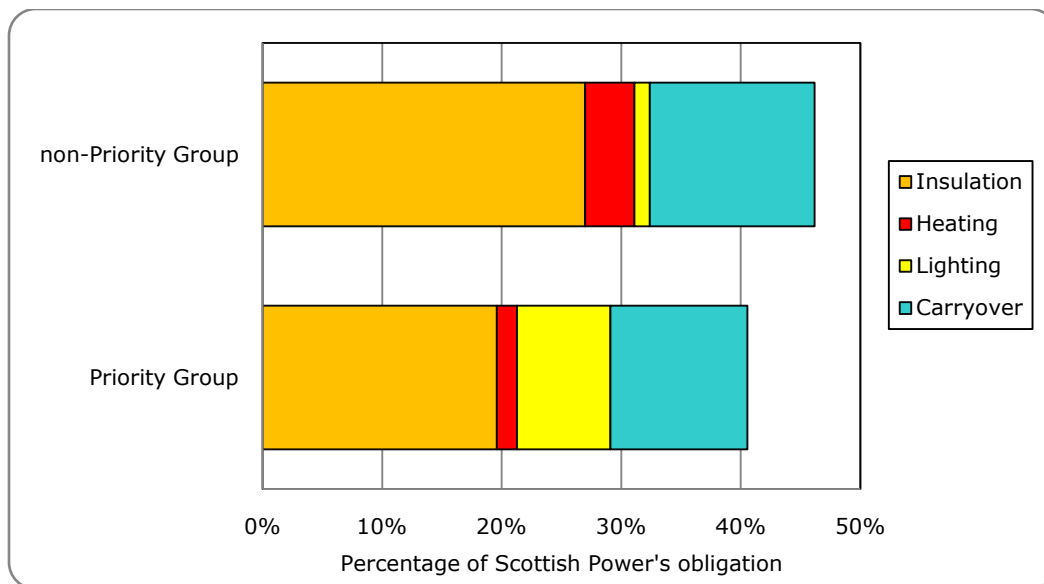
than loft insulation in both Year 1 and Year 2 of CERT. A very small number of solid wall insulations were also promoted and, along with EDF Energy, no DIY loft insulation measures were promoted in CERT.

3.44. Scottish Power achieved the lowest proportion of carbon savings from lighting - at 10 per cent. As presented in Table 3.6, the majority of these carbon savings were achieved in the first year of CERT. Carbon savings from lighting were achieved mainly through free distribution of CFLs in partnership with charities, SHPs and Warm Front.

3.45. Along with npower, Scottish Power achieved 7 per cent of carbon savings through heating measures. The proportion of carbon savings from heating measures has increased in the second year of CERT. The majority of these were made up from promotion of shower regulators, requested by consumers. No appliance and microgeneration activity has been undertaken.

**Targeting the Priority Group**

Figure 3.13. Scottish Power - achieved carbon emissions savings by consumer type as a percentage of its obligation



3.46. By the end of the second year of CERT, as shown in Figure 3.13, Scottish Power had met 41 per cent of its obligation in the Priority Group, and 46 per cent of its obligation in the non-Priority Group. These results show that Scottish Power has, on the basis of its quarterly reports, achieved enough carbon savings to comply with its Priority Group obligation.

3.47. Heating was predominantly delivered to the non-Priority Group consumers. The largest share of carbon savings to the non-Priority Group came from the installation of insulation measures.

## 4. Measures delivered during the first two years

### Chapter Summary

This chapter provides information on the types, volumes and delivery routes of measures that suppliers have promoted up to the end of the second year of CERT along with the proportion of carbon savings achieved. Where appropriate, the information presented covers the measures carried over from EEC2 in addition to those achieved in the first and second years of CERT.

This chapter also provides a brief overview of the take-up of demonstration action, market transformation action and the Priority Group flexibility mechanism.

4.1. Suppliers have continued to use a range of delivery mechanisms to deliver their obligations in the second year of CERT. These have included partnering with organisations such as Social Housing Providers (SHPs) and charities, promoting measures direct to householders, partnering with retailers and manufacturers, linking in with the Government's Warm Front programme and installing measures in new build properties in partnership with housing developers.

4.2. Table 4.1 details the numbers of installations in the first and second years of CERT, excluding EEC2 carryover, for the main measure types. Please note that this list is non-exhaustive, but represents the measures used to achieve the overwhelming majority of carbon savings to date. Please also note, that solar water heating and DIY loft insulation are reported in metres squared, rather than number of measures.

Table 4.1. The number of measures installed, excluding carryover from EEC2

Measure	Number of measures installed
Cavity wall insulation	1,121,317
Professional loft insulation	1,390,230
DIY Loft Insulation (m <sup>2</sup> )	46,953,917
Solid wall insulation	29,340
Fuel switching	37,282
CFLs	232,827,748
Heat pumps	2,094
Solar water heating (m <sup>2</sup> )	468
Small scale CHP	1

## Insulation

### Number of measures

4.3. Including EEC2 carryover, a total of just over 62 per cent of the carbon savings achieved by the end of the second year of CERT came from insulation measures. This is up slightly on 60 per cent in the first year. Loft insulation was the most popular insulation measure installed, with over 1,390,230 households benefiting from professional installations. In addition to this, 46,953,917 metres squared of CERT subsidised DIY loft insulation was purchased (with over a million homes benefiting). Cavity wall insulation was the second most popular insulation measure with over 1,121,317 households benefiting.

4.4. In the first two years of CERT, suppliers conducted 29,340 installations of solid wall insulation split between internal and external installations. There was an increase of 240 per cent in Year 2, over Year 1 of CERT. This is the largest increase of all the insulation measures. Solid wall insulation measures were mainly delivered through partnerships with SHPs. Examples of other insulation measures that were promoted include; draught proofing, hot water tank jackets, DIY radiator panels, and window glazing. However, these were promoted at much lower levels in comparison to other professionally installed insulation measures.

4.5. Table 4.2 shows the split of carbon savings achieved through insulation in the Priority and non-Priority Group at the end of the second year of CERT. This split is nearly identical to that achieved at the end of the first year of CERT with the majority achieved in the non-Priority Group.

Table 4.2. The contribution to total carbon emissions savings from installed insulation (professional and DIY) to the end of year 2 of CERT, including EEC2 carryover

Priority Group	non-Priority Group
28.0 per cent	34.3 per cent

### Delivery routes

4.6. Insulation measures were delivered through a variety of routes including retail promotions and working with the government's Warm Front programme. The vast majority, though, were delivered by direct promotion to private householders and through partnerships with SHPs.

4.7. Activity carried out in partnership with SHPs is popular with the suppliers as it allows them to target large numbers of Priority Group households, as well as lever in additional funding. In many instances suppliers are able to offer insulation to the Priority Group free of charge. When working with the Warm Front Scheme the suppliers fully fund the insulation measures (predominantly loft and cavity wall

insulation), allowing the Warm Front grant to focus on heating measures. Suppliers may also work with the Warm Deal and Welsh HEES schemes in this way.

## Lighting

### Number of measures

4.8. By the end of the second year of CERT (excluding EEC2 carryover), lighting accounted for nearly 23 per cent of the total carbon savings achieved (see Figure 2.2). Suppliers delivered over 233 million lighting measures in the first and second years of CERT (nearly 300 million including EEC2 carryover). During Year 2, there was a slowdown in lighting activity, with only half as many measures delivered in comparison to Year 1 of CERT. Nearly all of lighting measures distributed were CFLs; there were only a small number of energy efficient halogens promoted.

4.9. Lighting schemes are relatively straightforward to set up and deliver. All suppliers have at least one lighting scheme and a total of 18 lighting schemes were approved by the end of the second year of CERT. Table 4.3 shows that the carbon savings from lighting measures were mainly achieved in the non-Priority Group. Table 4.3 is based on carbon savings from all energy efficient lighting types; CFLs, halogens and luminaires.

Table 4.3. The contribution to total carbon emissions savings from lighting installed to the end of year 2 of CERT, including EEC2 carryover

Priority Group	non-Priority Group
11.5 per cent	16.4 per cent

### Delivery routes

4.10. Two main delivery routes were available to suppliers in the second year of CERT: direct and retail.

4.11. Direct schemes involve promoting CFLs directly to householders through free give-aways usually to the suppliers' own customers, in partnership with SHPs, or through promotions with commercial partners such as newspapers.

4.12. For direct schemes CERT guidelines required suppliers to take steps to ensure that the CFLs distributed were used by householders and that they resulted in a reduction in carbon emissions. These steps included: restricting the number of CFLs each household could receive and cross checking records to prevent double-counting; monitoring a percentage of the consumers who received CFLs to establish whether they were used; and including a freepost address with CFLs to allow unwanted bulbs to be returned.

4.13. The option to promote CFLs by the direct route was removed from CERT on 1 January 2010. This change was introduced by the CERT Amendment Order on 21 July 2009 and was designed to curtail the high volume of free CFLs being distributed. Suppliers were required to end all direct activity by 31 December 2009.

4.14. The second main delivery route is to sell CFLs through retail outlets or via mail-order promotions. Delivery of reduced-price CFLs through retailers has included partnerships with supermarkets, DIY outlets and other high street chains. Retailers are required to provide electronic point of sale (EPoS) data to confirm the number of measures sold to customers. The distribution of CFLs sold through retailers remains an eligible delivery route, although further restrictions have been imposed on the size of multi-packs and multi-buy offers.

4.15. For all delivery routes the types of lighting delivered are limited to those products accredited under the Energy Saving Trust's Energy Saving Trust Recommended programme. Suppliers are also required to ensure that their schemes offer a range of different types of CFL to ensure the consumer has sufficient choice to meet the lighting needs in their home.

## Heating

### Number of measures

4.16. Heating measures contributed almost 6 per cent of the total carbon savings achieved (Table 4.4). The majority of this was delivered by fuel switching i.e. replacing an electricity heating system with a gas heating system. Fuel switching was promoted to 37,282 households - nearly a 140 per cent increase on year one of CERT. Suppliers have also promoted heating controls, however the carbon savings per measure are considerably less than for fuel switching. The scope for heating measures within CERT is, however, limited as the boiler market has been transformed mainly due to Building Regulations and supplier promotions under the former EEC programme.

4.17. An innovation in the heating category is the introduction into CERT of shower regulators. These physically impose a limit on how quickly water can flow through a shower head. This saves hot water and thus reduces water heating costs as well as saving energy and carbon.

4.18. The majority of the carbon savings achieved by all heating measures have been in the non-Priority Group (see Table 4.4).

Table 4.4. The contribution to total carbon emissions savings from heating installed to the end of year 2 of CERT, including EEC2 carryover

Priority Group	non-Priority Group
2.5 per cent	3.2 per cent

### Delivery routes

4.19. Heating schemes were mainly delivered in partnership with SHPs and through promotions to private householders. In February 2009 Ofgem announced that the early replacement of g-rated boilers would be an eligible measure under the CERT. Guidance for g-rated boilers was provided in the new version of the Supplier Guidance, issued in September 2009. Ofgem are currently undertaking a review of the administrative arrangements for g-rated boilers. To date, no g-rated replacement activity has been seen in CERT.

## Appliances

### Number of measures

4.20. Carbon savings achieved by appliances make up nearly 4 per cent of the total achieved in the first two years of CERT, including EEC2 carryover. Whilst small, this is close to double the proportion that was achieved in year 1 alone.

4.21. This increasing share reflects suppliers' partnerships with the appliance industry coming to fruition. Three of the six obligated suppliers are now promoting appliances through multiple schemes. The carbon savings generated by these schemes, however, are expected to remain small due to the relatively small carbon saving that is achieved per measure. This is because for many appliance types the market has been transformed through improvements under the EEC programme and minimum standards under EU legislation. To gain accreditation under CERT, suppliers need to identify appliances where further incremental carbon savings, additional to those mandated by Energy Using Products Directive, can be achieved. Given the improvements in energy efficiency that have already been achieved in the appliance market, the opportunities for appliance schemes are likely to become more limited.

4.22. Appliances that are eligible under CERT include cold appliances rated A+ or A++ (excluding chest freezers, for which A rated appliances are permitted), integrated digital TVs (IDTVs), standby savers and energy efficient kettles. Some suppliers have explored using other products, being awarded scores for innovative consumer electronics and information and communications technology measures.



Table 4.5. The contribution to carbon emissions savings from appliances installed to the end of year 2 CERT, including EEC2 carryover

Priority Group	non-Priority Group
1.0 per cent	2.7 per cent

### Delivery routes

4.23. Cold appliances are eligible in three ways:

- incentive schemes (where the supplier incentivises more efficient appliances to a consumer who is already intending to purchase an appliance);
- trade-in schemes (where consumers replace appliances with a more efficient equivalent); or
- fridgesaver schemes (similar to the trade-in scheme but limited to the Priority Group).

4.24. Both the trade-in and fridgesaver schemes require existing appliances to be destroyed in a specified manner.

4.25. The majority of other schemes delivering appliances have been carried out in partnership with a manufacturer. In the case of consumer electronics, suppliers typically fund promotional activity for energy efficient models, contribute to research and development into product efficiency, or directly subsidise the cost of the product itself. Promotions in retail stores have also been a popular delivery method.

## Microgeneration

### Number of measures

4.26. Microgeneration measures represent a very small proportion of the total carbon savings achieved to date, contributing just 0.4 per cent of activity. The most common measures are heat pumps, installed in 2,094 households - nearly a four-fold increase on the total achieved at the end of year one of CERT - and solar water heating, now installed in 468 households. To date, just one CHP installation has been completed under CERT.

4.27. The majority of the carbon savings achieved were delivered to the non-Priority Group which is in line with expectations for measures such as these which have a high capital cost.

Table 4.6. The contribution to carbon emissions savings from microgeneration including CHP, installed to the end of year 2 CERT, including EEC2 carryover

Priority Group	non-Priority Group
0.1 per cent	0.3 per cent

### Delivery routes

4.28. Microgeneration schemes were delivered almost exclusively through three routes:

- through promotion to private householders (with professional installation); and
- in new build properties in partnership with housing developers.
- a small minority of schemes have seen suppliers partner with manufacturers, for example to subsidise the promotion of microgeneration products.

### Behavioural Measures

4.29. Real-time displays and Home Energy Advice packages were introduced into CERT as eligible measures with the Amendment Order on 21 July 2009. These are the only behavioural measures currently included in the scope of CERT with pre-defined carbon scores. A number of schemes promoting these measures have now been submitted to Ofgem and these are undergoing review. Ofgem is aware that activity to promote these measures is now underway although until these schemes are approved this activity will not be reported. Ofgem has been working closely with suppliers to move these schemes closer to formal approval. The next CERT Update, available from the Ofgem website, will include first quarter results for the third year of CERT and will include data on behavioural measures delivered.

### Demonstration action

4.30. Demonstration actions are trials, performed under the Order, for measures to which a firm quantified carbon saving cannot yet be attributed. In order to qualify the measure must be reasonably expected to achieve a reduction in carbon emissions.

4.31. Demonstration action provides an alternative route to the more traditional independent trial route, which is done at the expense of the manufacturer and/or supplier. Under demonstration action, suppliers are accredited with a carbon reduction that is based on their financial investment in the trial, irrespective of whether or not the trial produces quantifiable carbon savings for the product. DECC introduced this delivery route to encourage innovation and suppliers are choosing this route for a number of different technology types.

4.32. Upon completion of a demonstration action the results must be published and, where appropriate, a carbon saving and lifetime score awarded. At this point suppliers are free, should they choose, to promote the product as a standard or market transformation action under the programme.

4.33. Twelve demonstration action proposals have been submitted in the first two years of CERT; six of which have been approved. The total value of approved Demonstration Actions is circa £4.4m. This will generate a carbon return of 243,190 tCO<sub>2</sub> for suppliers - equivalent to just 0.1 per cent of the overall CER target of 185 MtCO<sub>2</sub>. No demonstration actions have yet been completed or carbon savings and lifetime awarded. This means that no data is reported on this type of activity in chapter three of this report.

### **Market transformation action**

4.34. Measures eligible as market transformation action include microgeneration and solid wall insulation. They also include measures that can pass a 'significantly greater than' test (in terms of carbon savings) or a 'significantly different to' test (in terms of function) in comparison to measures delivered under EEC1. The carbon savings attributed to these actions are eligible for 50 per cent uplift, capped at 10 per cent of a supplier's obligation, including any demonstration activity. An additional 2 per cent is available for microgeneration.

4.35. A number of new measures have been introduced into CERT under the market transformation rules. In the second year of CERT, this included for example, shower regulators. The market transformation provision is likely to be used by suppliers, however it will not be possible to calculate the scale of this activity until the end of the programme. In reality suppliers may be closer to achieving their targets as market transformation uplifts have not been calculated and awarded at present.

### **Priority Group flexibility mechanism**

4.36. This mechanism allows suppliers some flexibility in reaching their target for carbon savings in the Priority Group. The measures permitted in this mechanism are ground source heat pumps and a defined level of solid wall insulation. They are aimed at those off the gas grid and in hard to treat homes and exclude social housing properties. Householders eligible for these measures, under the Priority Group flexibility mechanism, must be in the benefits sub-set of the Priority Group. The carbon savings achieved through this mechanism are eligible for uplifts. The factor of the uplift differs for each measure type.

4.37. Two schemes have been approved under the Priority Group flexibility mechanism, proposing carbon savings (including the uplift) of 2 million lifetime tonnes carbon dioxide (equivalent to 1.1 per cent of the overall CER target). These schemes have proposed achieving reductions through both ground source heat pumps and solid wall insulation. As yet, no carbon savings have been reported from either scheme.

## 5. Trend analysis

### Chapter Summary

This chapter highlights the key issues and trends that have arisen during the second year of CERT. The analysis is based on the first two years of the programme and represents Ofgem's findings so far.

### The progress to the end of the second year

5.1. Activity in the second year of CERT has remained high. By the end of the second year, suppliers had achieved over 149 MtCO<sub>2</sub> savings against the 185 MtCO<sub>2</sub> overall target. This equates to 81 per cent of the overall CER target having been achieved (including carryover from EEC2). Of the residual target (i.e. the overall CER target minus EEC2 carryover) suppliers had met 76 per cent. Comparing this with the percentage of the residual target achieved in the first year (38 per cent) it can be seen that activity levels overall have remained broadly flat during the second year.

5.2. By the end of the second year of CERT, 43 per cent of the progress had been targeted at the Priority Group; excluding EEC2 carryover, this figure rises to 47 per cent. Comparing this activity with the first year of the programme, where Priority Group activity was at levels of 45 per cent and 53 per cent respectively, indicates that activity in the Priority Group, in the second year, dropped slightly.

5.3. In order to ensure a smooth transition between programmes the government has, historically, provided early certainty to the obligated energy suppliers in terms of activity that could be carried over from one programme to the next, thus encouraging the maintenance of activity levels. Following DECC's CERT Extension consultation which ended in March 2010, the decision document "Paving the way for a Green Deal: Extending the Carbon Emissions Reduction supplier obligation to December 2012" was published in June 2010. The CERT extension Order was laid before parliament in July 2010 and allows for activity to be accredited to the new sub targets from 1 August 2010.

### Market analysis

5.4. Insulation measures have again dominated the carbon savings achieved by suppliers, accounting for approximately 60 per cent of activity in the first two years of the programme. Lighting activity also continued to provide a significant proportion of carbon savings for suppliers, accounting for approximately 30 per cent of activity in the first two years of the programme. There was a slight increase in insulation activity in the second year, counter balancing a slow-down in lighting. This is likely to have been as a result of most of the direct mail activity being carried out in Year 1 and the legislative change that government introduced which made the promotion of

CFLs ineligible under the CERT programme, from 1 January 2010, unless they were purchased via a retail outlet.

5.5. Insulation and lighting were popular measures with suppliers as they are cost effective in terms of carbon saved per pound spent by the supplier. DIY loft insulation has also been promoted heavily because it is a relatively low cost measure. CERT encourages suppliers to deliver their obligations at least cost, as it is assumed suppliers pass through the costs to consumers via their energy bills. It is therefore unsurprising that insulation and lighting have dominated the first two years of the programme.

5.6. In the Impact Assessment of the Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009 DECC estimated, based on an illustrative mix of measures, the cost to suppliers of delivering the CERT programme would be £3.2 billion. Therefore, in achieving 81 per cent of the overall target, according to DECC's estimates, suppliers would have spent in the region of £2.6 billion.

## **Measures the suppliers have used**

5.7. Insulation activity was split almost equally between cavity wall insulation, professionally installed loft insulation, and DIY loft insulation – all of which passed the 1 million homes treated mark. Solid wall insulation activity was significantly less, at around 30,000 homes treated. This was to be expected as solid wall insulation remains a less cost effective measure for suppliers to deliver.

5.8. Over 230 million CFLs were delivered in the first two years of CERT. Suppliers used a variety of delivery routes to promote these measures including direct mail and retail. The data provided by suppliers indicates that of the 233 million CFLs distributed, 52 per cent were delivered via direct mail schemes, 30 per cent via retail, with the remaining 18 per cent coming from 'mixed' schemes (a combination of retail and direct delivery routes). Following changes to the legislation at the end of December 2009, all but retail CFLs became ineligible and we have seen a consequent reduction in CFL activity. Delivery rates for the final quarter of year 2 are around two thirds of those seen at the same time in the previous year. There was, however, a noticeable increase in activity from some suppliers, just prior to the change, keen to deliver free CFLs before they became ineligible.

5.9. In terms of other measures promoted, innovative activity remained a key component of many suppliers' activity, with consumer electronics being at the fore. The partnerships that the suppliers have developed with many of the manufacturers through CERT have been instrumental in driving energy efficiency in this area. In addition, in the past year we have seen hot water saving devices, such as shower regulators, increase in popularity, with over 2 million having been promoted. These are proving to be very cost effective for suppliers.

## Targeting the Priority Group

5.10. By the end of the second year suppliers had achieved 64.5 MtCO<sub>2</sub> savings in the Priority Group, including EEC2 carryover. This equates to 43 per cent of overall activity. Excluding EEC2 carryover, the figures are even more encouraging with suppliers having achieved 47 per cent of carbon savings in the Priority Group. Of the overall CER target this activity represents around 35 per cent.

5.11. Suppliers continued to use a variety of routes for delivering measures to the Priority Group, many of which are delivered at no cost to the recipient, including working in partnership with Local Authorities/Social Housing Providers, direct marketing to the owner-occupier sector, and integrating with other government programmes such as Warm Front (where Warm Front provides the heating system and the CERT supplier provides the insulation). The measures delivered to the Priority Group continued to be dominated by insulation and lighting.

Figure 5.1 - Priority Group carbon savings including EEC2 carryover for insulation and all measures types

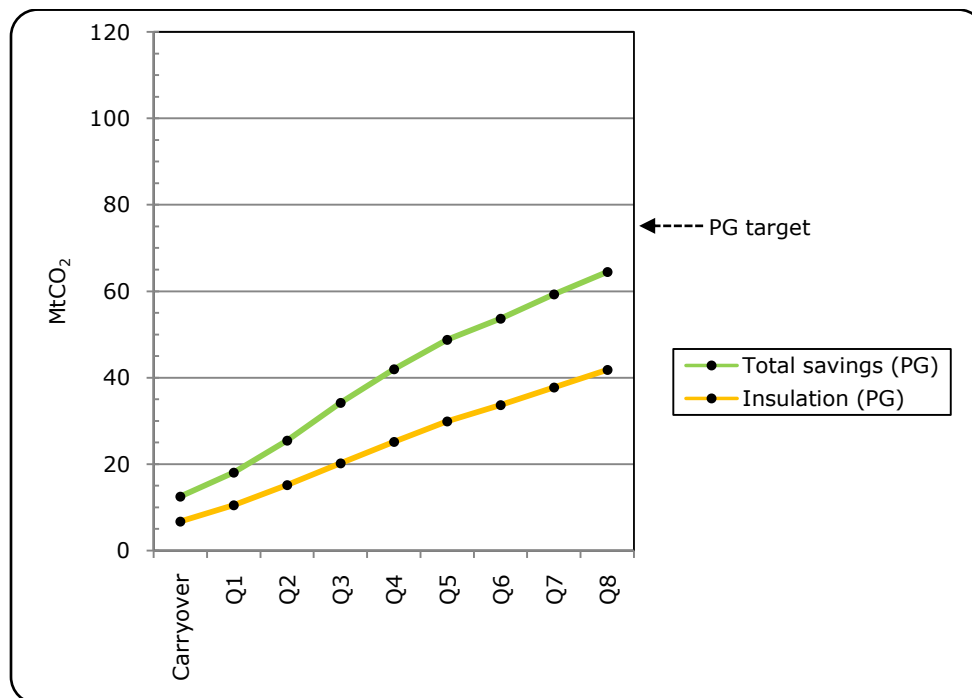
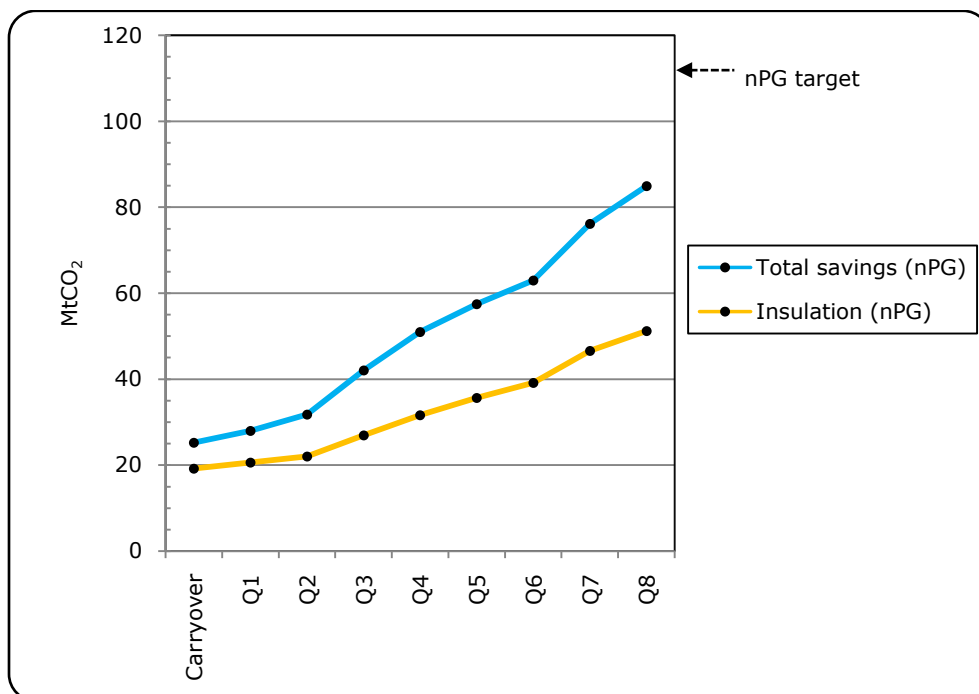


Figure 5.2 - non-Priority Group carbon savings including EEC2 carryover for insulation and all measures types



5.12. Figures 5.2 and 5.3 show graphically how cumulative carbon savings have developed, on a quarterly basis, to the end of Year 2, including EEC2 carryover. Figure 5.1 shows this in relation to Priority Group carbon savings, with Figure 5.2 illustrating cumulative savings in the non-Priority Group. Activity in terms of cumulative insulation carbon savings is also shown in both charts. Both charts show relatively steady levels of activity in both groups.

5.13. More recently anecdotal evidence has suggested that activity levels in the Priority Group had started to decline as suppliers neared the end of their CERT 2008-11 programmes. Our analysis indicates that this may have been starting to happen. Figure 5.2 and Figure 5.3 do show a slight slowing in Priority Group activity, from around Q6, whilst the level of activity in the non-Priority Group starts to rise from Q7. Further analysis of the data supports this. By the end of the second year of CERT, suppliers had met 70 per cent of their Priority Group obligation (excluding EEC2 carryover), of which 40 per cent was achieved in the first year and 30 per cent was achieved in the second year. The introduction of the CERT extension will encourage suppliers to continue to promote measures to this group.

### Delivery implications

5.14. Overall, the delivery of measures across the first two years of the CERT programme have been broadly consistent with insulation dominating, followed by lighting. The removal of all but retail CFLs from the programme, from 1 January 2010, is likely to have an impact on the delivery of CERT – although at this stage (3

months since the ban) this is difficult to analyse. Insulation activity has increased slightly in Year 2 with 60 per cent of carbon savings, excluding EEC2 carryover, being achieved from insulation, compared to 56 per cent in the first year.

5.15. With suppliers having achieved 81 per cent of the overall CER target, and with Priority Group activity at 43 per cent, it is clear that suppliers were well on target to meeting their CERT 2008-11 obligations. The introduction of the CERT extension with the increased target indicates that suppliers will have to maintain activity levels out towards the end of 2012 in order to meet the new obligations. Carbon savings achieved in the first two years of CERT equate to around 50 per cent of the revised 293 MtCO<sub>2</sub> CERT extension target.

### **The forthcoming year**

5.16. Ofgem will continue to work closely with the suppliers on their schemes, overseeing their progress and working with them to ensure that their banking and completion reports demonstrate that they have complied with the legislation. Ofgem will also continue to work closely with DECC on the policy and design of future programmes such as the government's 'Green Deal'. We will also implement the changes resulting from the CERT extension Order.

5.17. Ofgem will continue to monitor suppliers' schemes and publish data on a quarterly basis. We will report again to the Secretary of State on the CERT programme in August 2011.



## Appendices

### Index

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1	Suppliers licences	39
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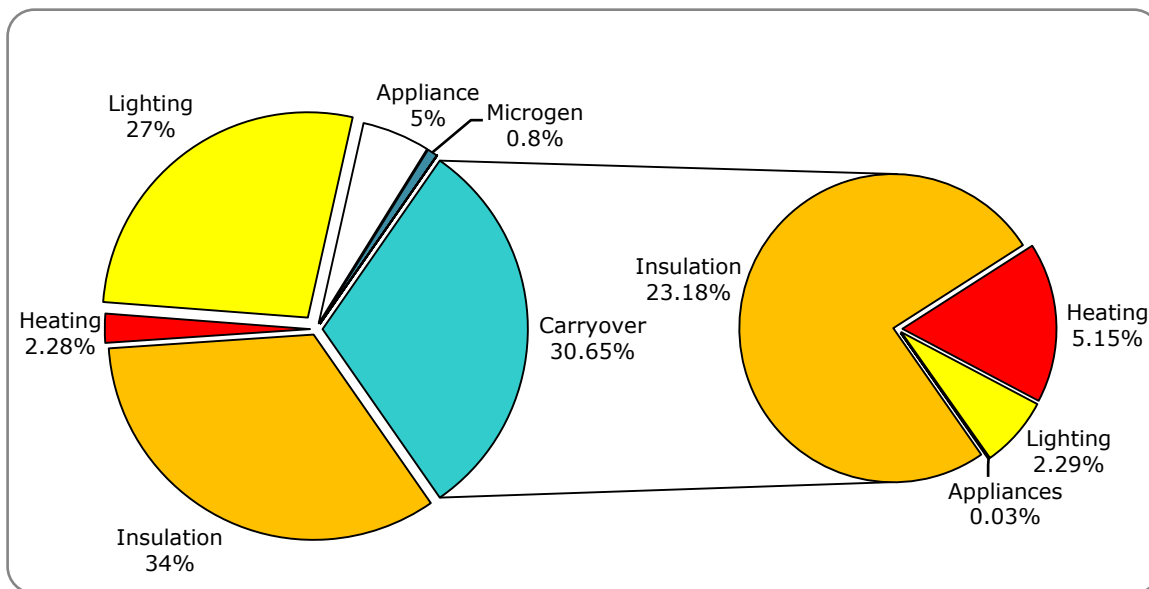
## Appendix 1 – Supplier licences

Table 1.1 The supplier groups and their licences that have been set CERT obligations for 2008-11

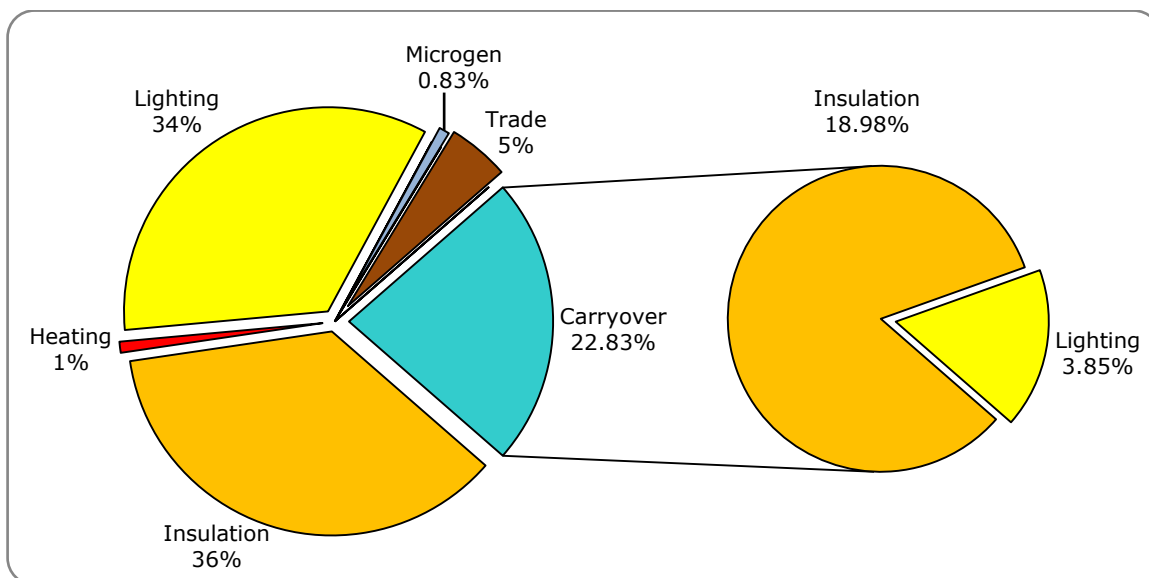
Supplier	Licence	Fuel
British Gas	British Gas Trading	Gas
British Gas	British Gas Trading	Electricity
E.ON Energy	E.ON Energy Limited	Gas
E.ON Energy	E.ON Energy Limited	Electricity
EDF Energy	EDF Energy Customers Plc	Gas
EDF Energy	EDF Energy Customers Plc	Electricity
EDF Energy	Seaboard Energy Limited	Gas
EDF Energy	Seaboard Energy Limited	Electricity
npower	npower Commercial Gas Limited	Gas
npower	npower Direct Limited	Gas
npower	npower Direct Limited	Electricity
npower	npower Gas Limited	Gas
npower	npower Northern Supply Limited	Electricity
npower	npower Northern Limited	Gas
npower	npower Northern Limited	Electricity
npower	YE Gas Limited	Gas
npower	npower Limited	Electricity
npower	Gas Plus Supply Limited	Gas
npower	Electricity Plus Supply Limited	Electricity
npower	npower Yorkshire Limited	Gas
npower	npower Yorkshire Supply Limited	Electricity
Scottish and Southern Energy	Southern Electric Gas Limited	Gas
Scottish and Southern Energy	SSE Energy Supply Limited	Electricity
Scottish Power	Scottish Power Energy Retail	Gas
Scottish Power	Scottish Power Energy Retail	Electricity

**Appendix 2 – Suppliers' carbon savings achieved by measure type and EEC2 carryover (carryover presented as a measure mix)**

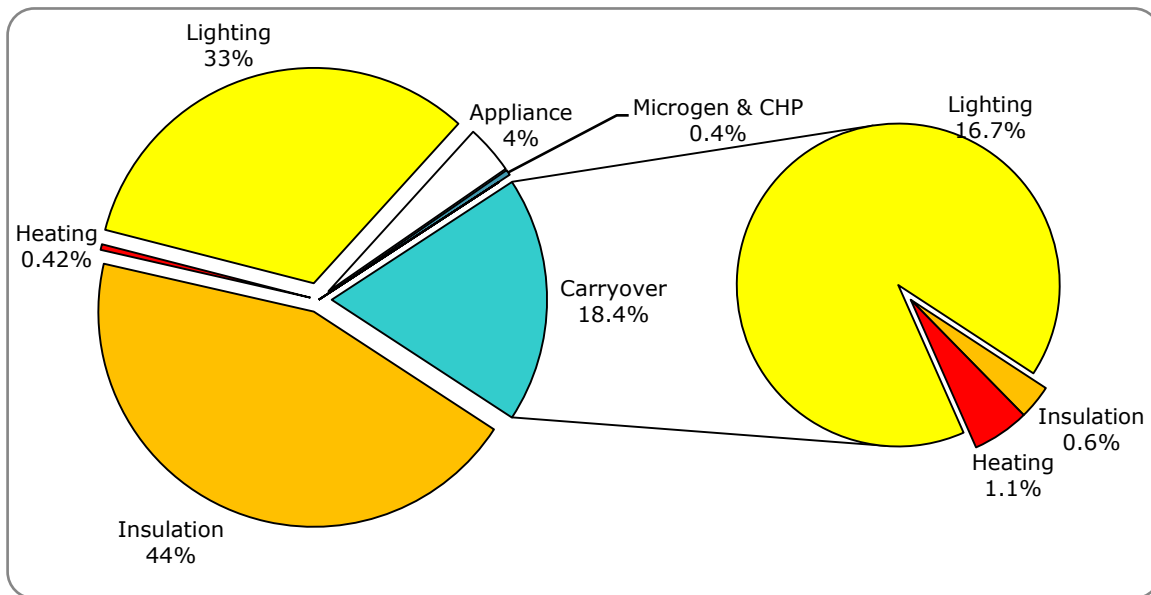
**British Gas**



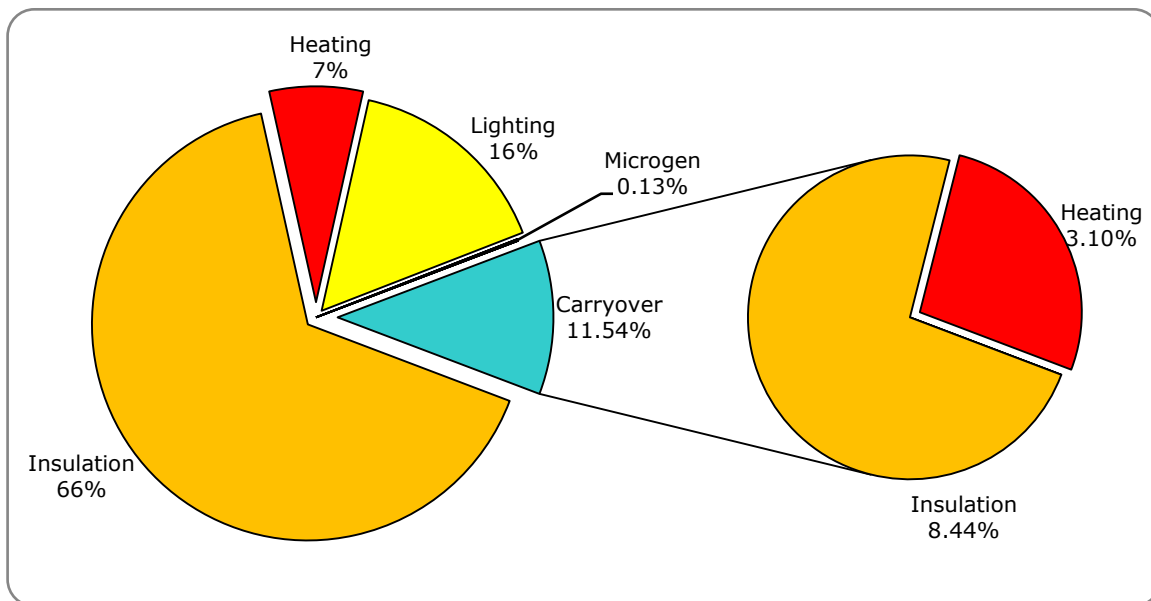
**EDF Energy**



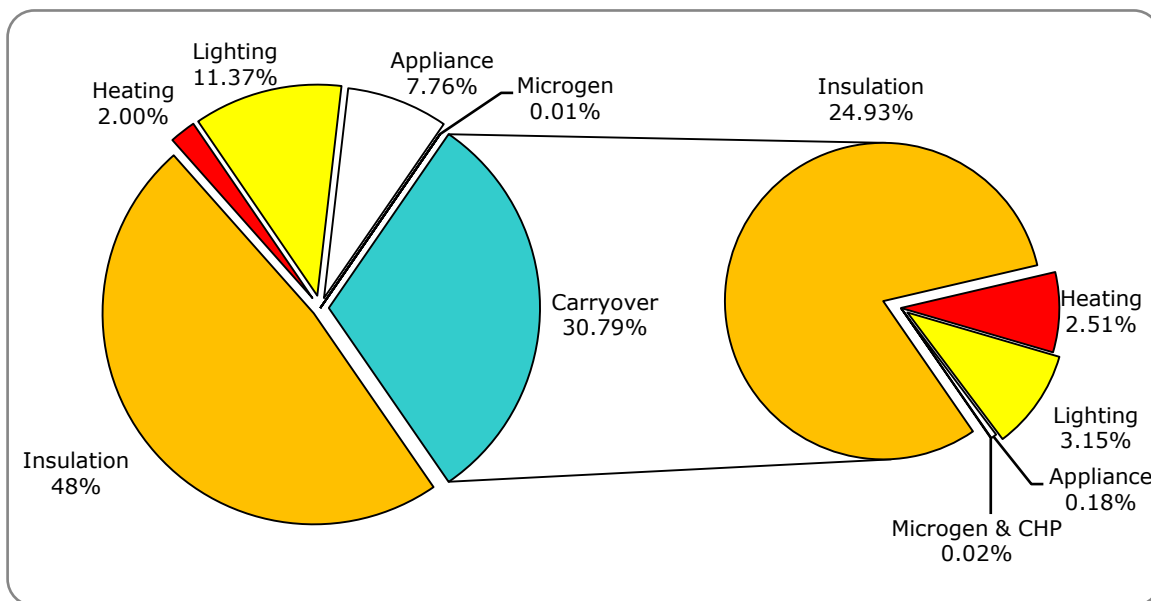
**E.ON**



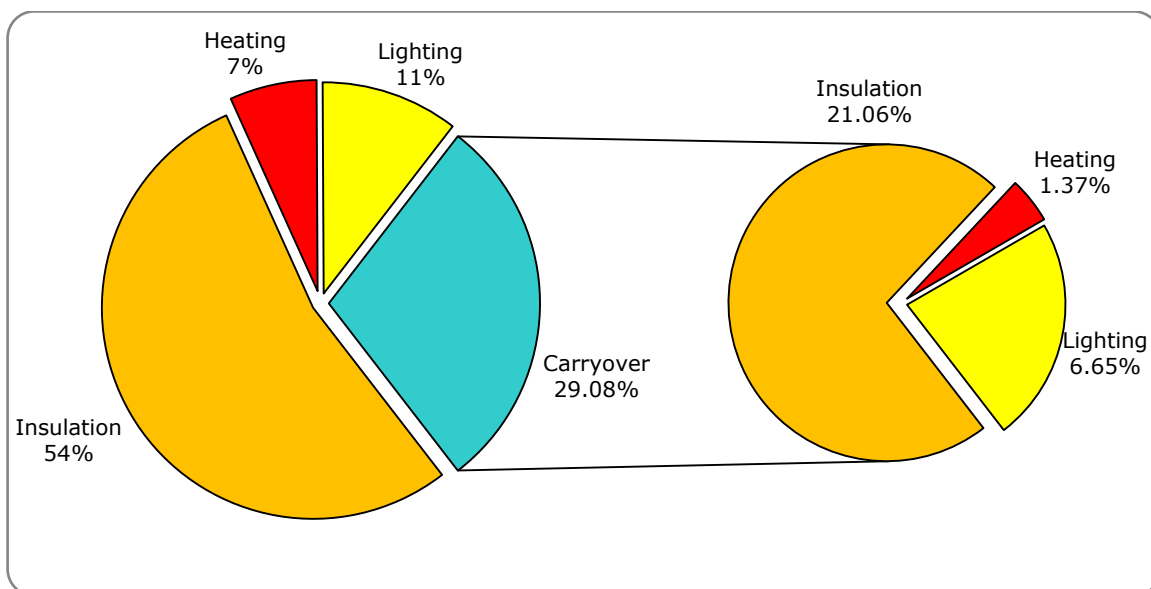
**npower**



### Scottish and Southern Energy



### Scottish Power



## Appendix 3 – The Authority’s Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority (“the Authority”), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts.<sup>1</sup>

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly<sup>2</sup>.

1.4. The Authority’s principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of existing and future consumers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- the need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- the need to secure that all reasonable demands for electricity are met;
- the need to secure that licence holders are able to finance the activities which are the subject of obligations on them<sup>3</sup>;
- the need to contribute to the achievement of sustainable development; and
- the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.<sup>4</sup>

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

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<sup>1</sup> entitled “Gas Supply” and “Electricity Supply” respectively.

<sup>2</sup> However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

<sup>3</sup> under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

<sup>4</sup> The Authority may have regard to other descriptions of consumers.

- promote efficiency and economy on the part of those licensed<sup>5</sup> under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
- protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity; and
- secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- the effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation<sup>6</sup> and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

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<sup>5</sup> or persons authorised by exemptions to carry on any activity.

<sup>6</sup> Council Regulation (EC) 1/2003

## Appendix 4 - Glossary

### Achieved carbon savings

Achieved carbon savings are calculated based on the CERT carbon saving score and lifetime of the measure. They are accredited towards a suppliers' obligation if measures are promoted and installed in households. Achieved carbon savings are used to meet suppliers' CER target.

### Accreditation

The determination of the carbon emissions reduction and lifetime attributable to measures under the CERT

### Banking

The process of suppliers submitting interim activity reports and Ofgem estimating their savings before the end of the programme

### Behavioural measures

Real-time displays and Home Energy Advice packages are the only behavioural measures currently included in the scope of CERT. These were introduced into CERT as eligible measures with the Amendment Order on July 21st 2009

### EEC2 carryover

Suppliers were able to apply to Ofgem for the equivalent carbon emissions reduction from any excess carbon savings achieved surplus to their EEC2 target to be credited towards their obligation under the CERT

### CERT

Carbon Emissions Reduction Target

### CESP

Community Energy Savings Programme (CESP)

### CER target

The overall target for carbon emissions reduction, set by DECC under the order

### CFLs

Compact Fluorescent Lamps (energy efficient light bulbs)

### CHP



Combined Heat and Power

### Climate Change Programme

The Climate Change Programme, published in 2006, sets out the government's policies and priorities for action on climate change in the UK and internationally

### Completion

Submission of final scheme reports by suppliers and determination of savings by Ofgem

### DECC

Department of Energy and Climate Change

### Demonstration Action

Demonstration actions are trials, performed under the Order, for measures to which a firm quantified carbon saving cannot yet be attributed. In order to qualify the measures must be reasonably expected to achieve a reduction in carbon emissions

### DIY

Do-it-yourself

### EEC1

Energy Efficiency Commitment, 1 April 2002 - 31 March 2005

EEC1 required gas and electricity suppliers to achieve an energy saving target of 62 TWh in domestic households in Great Britain, between 1 April 2002 and 31 March 2005. At least 50 per cent of the target had to be met in relation to Priority Group consumers.

### EEC2

Energy Efficiency Commitment, 1 April 2005 - 31 March 2008

EEC2 required gas and electricity suppliers to achieve an energy saving target of 130 TWh in domestic households in Great Britain, between 1 April 2005 and 31 March 2008. At least 50 per cent of the target had to be met in relation to Priority Group consumers.

### EPoS

Electronic Point of Sale data - sales data from a retailer's computer system

### EST

Energy Saving Trust

### Fuel switching

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Fuel switching action relates to the switching of carbon intensive primary heating fuel of the property to a fuel with lower carbon content

#### IDTV

Integrated digital television

#### Illustrative Mix

DECC's illustrative mix of measures is presented within its consultation document and indicates how suppliers might meet their carbon obligation. Suppliers are free to choose their own mix of measures or include other measures, subject to approval by Ofgem

#### LPG

Liquid petroleum gas

#### Market Transformation

These are measures including microgeneration and solid wall insulation. They also include measures that can pass a 'significantly greater than' test (in terms of savings) or a 'significantly different to' test (in terms of function) in comparison to measures delivered under EEC1

#### Microgeneration/Microgen

Under the terms of CERT, these measures include small scale biomass boilers, wind turbines, heat pumps, solar photovoltaic, small hydro, solar water heating, large and small scale Combined Heat and Power and other microgeneration

#### MtCO<sub>2</sub>

Million tonnes of carbon dioxide

#### The Order

Electricity and Gas (Carbon Emissions Reduction) Order 2008 and The Electricity and Gas (Carbon Emissions Reduction) (Amendment) Order 2009 (together referred to as 'the Order').

#### Priority Group

Defined in the CERT Order as the group of domestic energy users where each member fulfils one of the following criteria:

(a) is in receipt of at least one of the following benefits: council tax benefit, housing benefit, income support, an income-based jobseeker's allowance, an income-related employment and support allowance, an attendance allowance, a disability living allowance, a war disablement pension which includes either a mobility supplement or

constant attendance allowance, a disablement pension which includes constant attendance allowance, or a state pension credit, or  
(b) is in receipt of at least one of the following credits: child tax credit or working tax credit, and has a relevant income of less than £16,040, or  
(c) is at least 70 years old

#### Priority Group flexibility

This mechanism allows suppliers some flexibility in reaching their target for savings in the Priority Group. The measures are ground source heat pumps and a defined level of solid wall insulation. They are aimed at those off gas grid and in hard to treat homes. Householders must be in the benefits sub-set of the Priority Group

#### SHP

Social Housing Provider, a Local Authority or a Registered Social Landlord

#### SSE

Scottish and Southern Energy

#### Supplier activity

Energy efficiency work undertaken by suppliers to meet the Carbon Emissions Reduction Target