ofgem e-serve Making a positive difference for energy consumers

The final report of the Community Energy Saving Programme (CESP) 2009-2012

Final Report

.	65/12	Contact:	Aileen Duffy
Reference: Publication date:	65/13 May 2013	Team:	Energy Efficiency
		Email:	CESP@ofgem.gov.uk

Overview:

This document is the final statutory report on the Community Energy Saving Programme 2009-2012 (CESP). It provides details on the achievement of the targets and obligations under the programme, which ended on 31 December 2012.

CESP required certain gas and electricity suppliers and certain electricity generators to deliver energy saving measures to domestic energy users in specified low income areas of Great Britain.

Energy companies were required to achieve an overall target of 19.25 million lifetime tonnes of carbon dioxide (Mt CO_2) by 31 December 2012. Energy companies achieved 16.31 Mt CO_2 , almost 85% of the overall target.

Context

The government has introduced a range of policies to reduce the United Kingdom's greenhouse gas emissions by 80% by 2050. Currently, about 25% of UK emissions result from energy used to heat and power our homes.

The Community Energy Saving Programme 2009-2012 (CESP) was a policy, set down in legislation, designed to improve domestic energy efficiency standards in the most deprived geographical areas across Great Britain. CESP was a separate programme to the Carbon Emissions Reduction Target (CERT) which made energy efficiency measures available to all consumers.

The Department of Energy and Climate Change (DECC) was responsible for setting the overall CESP target and for designing the statutory programme through which this target was to be achieved. Ofgem was responsible for administering the programme, on behalf of the Gas and Electricity Markets Authority ('the Authority'). The CESP obligation period ran from 1 October 2009 to 31 December 2012.

Ofgem has been required annually to report to the Secretary of State for Energy and Climate Change on progress of the programme. This final report concludes the reporting requirements placed upon Ofgem and details the position of CESP at the closedown of the programme.

Associated documents

- The Electricity and Gas (Community Energy Saving Programme) Order 2009
- Explanatory Memorandum to the Electricity and Gas (Community Energy Saving Programme) Order 2009
- Community Energy Saving Programme Generator and Supplier Guidance
- Community Energy Saving Programme (CESP). Communities: Areas of Low Income
- Community Energy Saving Programme 2009-2012 Annual Report, at 31 December 2011
- Community Energy Saving Programme, half-yearly Update, issue 5, September 2012

Contents

Ex	ecutive summary	4
1.	Introduction	6
2.	The final CESP position Overall carbon savings Schemes Measures and dwellings Regional analysis Trading and transfers	9 11 12 15
3.	Final energy company achievements	24
4.	Carbon savings analysis	34 37 38
5.	Monitoring progress	39
6.	Conclusions	42 43 44
Aŗ	Appendices	47 48 51 52

Executive summary

This final report fulfils the Authority's duty to report to the Secretary of State for Energy and Climate Change under The Electricity and Gas (Community Energy Saving Programme) Order 2009. The report details whether the following have been met:

- the overall carbon emissions reduction target;
- the supplier and generator carbon emissions reduction targets; and
- the supplier and generator carbon emissions reduction obligations.

Energy companies achieved the above by setting up schemes to promote and deliver energy saving measures to domestic energy users. Carbon savings were awarded for each measure installed. Incentives were integral to the achievement of carbon savings; bonus savings were awarded for the installation of specific measures, the installation of multiple measures to a single property, and the treatment of as many properties as possible in defined areas.

The licence holders of ten energy companies were obligated under the scheme:

- six vertically integrated energy companies¹: British Gas, EDF Energy, E.ON, RWE npower, SSE², Scottish Power, and
- four independent electricity generators: Drax Power, Eggborough Power, GDF Suez/IPM and Intergen.

Overall position

In parallel with the CESP scheme, the CERT scheme delivered carbon savings to consumers. Across both schemes more than 99% of the combined carbon savings were achieved.

The overall CESP target was 19.25 million lifetime tonnes of carbon dioxide (Mt CO_2). By the end of the programme (31 December 2012) energy companies had achieved 16.31 Mt CO_2 (84.7%) against the overall target. As a result, this target was not met.

Energy companies can carry forward excess activity from CESP to the Energy Companies Obligation (ECO) and this is not taken into consideration here.

Supplier and generator targets

The CESP Order specified half of the overall target should be met by suppliers and half by generators. The Order allowed for the trading of obligations and, following some trading of obligations, the final supplier target was 16.63 Mt CO_2 and the generator target was 2.62 Mt CO_2 .

Suppliers met 92.4% and generators met 36.0% of their respective targets. Consequently both the supplier and generator targets were not met.

¹ These companies have obligated subsidiaries with both supply (gas or electricity) and generation licences

² Prior to 2010 SSE was Scottish and Southern Energy plc



Compliance by energy company

The table below shows energy company compliance against the total obligations of the group. Each licence holder within an energy company must have achieved its obligation for that energy company to be shown as compliant. In the case of the vertically integrated energy companies the compliance status shown is based on the status of their generation and supply licences combined.

Four energy companies complied with all of their CESP obligations: EDF Energy, E.ON, RWE npower and Eggborough Power. Six energy companies did not comply: British Gas, SSE, Scottish Power, Drax Power, GDF Suez/IPM and Intergen.

Vertically Integrated Energy Companies						
British Gas EDF Energy		E.ON	RWE npower	SSE	Scottish Power	
Non- compliant Compliant		Compliant	Compliant	Non- compliant	Non- compliant	
Independent Generators						
	Drax Power	Eggborough Power	GDF Suez/IPM	Intergen		
	Non- compliant	Compliant	Non- compliant	Non- compliant		

Ofgem will consider whether to exercise its enforcement powers in relation to any supplier or generator which has failed to achieve its obligation. This could include the imposition of a financial penalty.

Key findings

CESP was designed to incentivise the installation of energy saving measures using a house-by-house approach, in low income areas. Key findings are set out below.

- Early progress was slow with less than one third of the overall target achieved by June 2012. However, there was a marked increase in delivery in the final six months of the programme.
- By the end of the programme almost 500 schemes were completed, with scheme size being generally smaller than anticipated.
- CESP was particularly effective in incentivising the treatment of properties of solid and non-traditional wall construction. Over 75,000 dwellings were treated with external solid wall insulation.
- The CESP bonus structure was complex and bonuses were not utilised to the full extent possible. However, energy companies used these bonuses to achieve almost three quarters of their carbon savings, demonstrating their effectiveness in driving energy company approaches.
- There were a number of technical challenges which initially affected delivery by the energy companies. Nevertheless, by the end of the programme these challenges had been tackled and four energy companies had reached a position of compliance.

1. Introduction

- 1.1. The Electricity and Gas (Community Energy Saving Programme) Order 2009 (the Order) was made on 20 July 2009 and came into force on 1 September 2009. The Order has been subject to one amendment, on 21 December 2011³.
- 1.2. The Order set an obligation on certain gas and electricity suppliers and certain electricity generators to reduce carbon dioxide emissions by promoting a range of energy efficiency measures (qualifying actions) to domestic energy users. Appendix 1 sets out these measures.
- 1.3. The overall target for the Community Energy Saving Programme (CESP) was set at 19.25 million lifetime tonnes of carbon dioxide (Mt CO₂). This comprised a target of 9.625 Mt CO2 for suppliers and 9.625 Mt CO2 for generators. Suppliers and generators were to meet their obligations between 1 October 2009 and 31 December 2012. The suppliers and generators obligated under the Order are set out in Appendix 2. Under the Order, obligations were imposed on individual licence holders rather than on the parent company of a group of licence holders. However, for clarity and ease of reporting, the analysis presented here is aggregated at group level (referred to as an 'energy company').
- 1.4. The Order required that energy saving measures were delivered in geographical areas (Lower Super Output Areas in England and Wales, and Data Zones in Scotland, hereafter referred to as 'low income areas') selected using the Income Domain of the Indices of Multiple Deprivation (IMD) in England, Scotland and Wales⁴. In England the lowest 10% of areas ranked in the IMD qualified and in Scotland and Wales the lowest 15% qualified.
- 1.5. Energy companies achieved savings against their obligations by setting up schemes to promote and deliver energy saving measures to domestic energy users. Almost all CESP measures were delivered through partnerships with social housing providers (SHPs) or by direct promotion to private households. CESP was structured to incentivise the energy companies to install particular measures (eg solid wall insulation), and to undertake as much activity as possible in each house treated and in each area targeted. This was achieved using the following incentives:
 - Individual measure adjustments were applied to solid wall insulation, Grated boiler replacements, renewable heat generation technologies and micro combined heat and power (CHP);

³ The amendment increased the minimum number of domestic customers required to obligate a supplier from 50,000 to 250,000

⁴ The Index of Multiple Deprivation is a study published by the Department of Communities and Local Government, using several indicators to identify deprived areas in the UK

- Whole house bonuses were triggered when two or more measures were fitted in a single dwelling;
- An area bonus was triggered when at least 25% of all dwellings in a low income area were treated by the same supplier or generator.

Both unadjusted (ie before the application of bonuses) and adjusted carbon savings are detailed in this document.

- 1.6. Under certain circumstances suppliers and generators were allowed to trade their obligations and to transfer completed measures. The information and analysis presented in this document relates to the post- trades and transfers position.
- 1.7. CESP ran in parallel with the Carbon Emissions Reduction Target programme (CERT) which Ofgem also administered.
- 1.8. CESP is succeeded by the Gas and Electricity (Energy Companies Obligation) Order 2012 (the ECO). Certain qualifying actions promoted under CESP, if they are excess to that energy company's CESP obligations, can be carried forward to ECO as excess actions. The carbon savings in this report include excess activity which energy companies intend to carry forward into ECO. Excess actions will be finalised in the summer of 2013.
- 1.9. Previous annual reports were based on provisional data from energy companies. This report is based on actual determination of carbon savings, upon which Ofgem has assessed energy companies' compliance against their obligations.
- 1.10. The remaining chapters of this report provide information on specific aspects of the CESP programme:
 - Chapter Two outlines the position of CESP based on scheme completion data submitted by the energy companies for schemes to the end of 2012. It provides information on the delivery of schemes and measures, and the overall carbon savings achieved. It also provides a regional breakdown of delivery and a section illustrating the effect of trades and transfers on obligations.
 - Chapter Three outlines the carbon savings achieved and approaches used by each of the energy companies.
 - Chapter Four provides an analysis of unadjusted carbon savings, and how these savings have been increased through bonuses and uplifts. It also considers the effectiveness of the incentive structure in influencing energy companies to install particular measures and to achieve multiple installations in properties.

- Chapter Five describes the mechanisms Ofgem put in place to ensure installed measures met appropriate technical standards, and completed measures had been reported to Ofgem correctly.
- Chapter Six considers the final position achieved by the energy companies, and discusses the approaches employed and the challenges encountered in trying to achieve the legislative obligations and targets. It examines the CESP policy intention, the aspects that were not fully realised and those that were successful. It also considers how learnings from CESP have helped to influence the design of future programmes.
- 1.11. Where numbers provided in the tables do not exactly match those cited in the text, or numbers do not sum to the totals in tables, it is due to rounding.

2. The final CESP position

Chapter Summary

This chapter outlines the position of CESP based on scheme completion data submitted by the energy companies for schemes to the end of 2012. It provides information on the delivery of schemes and measures, and the overall carbon savings achieved. It also provides a regional breakdown of delivery and a section illustrating the effect of trades and transfers on obligations.

Overall carbon savings

Carbon savings achieved against overall target

2.1. The overall CESP target was 19.25 Mt CO_2 . By the end of the programme (31 December 2012) energy companies had achieved 16.31 Mt CO_2 (84.7%) against the overall target. This is a shortfall of 2.94 Mt CO_2 or 15.3% (figure 2.1). Therefore, this target was not met.

Figure 2.1 Carbon savings achieved against overall target



Carbon savings achieved against the supplier and generator targets

- 2.2. The overall target was split equally between suppliers and generators (9.625 Mt CO_2 each). However, the energy companies were allowed to trade their obligations and suppliers took on a large proportion of the generators' obligations. Following these trades, the supplier target was 16.63 Mt CO_2 , and the generator target was 2.62 Mt CO_2 .
- 2.3. Suppliers met 92.4% and generators met 36.0% of their respective targets. Little progress was made against the significantly lower generator target. Therefore, despite the trades, the generator shortfall (1.68 Mt CO₂) was greater than that of the suppliers (1.26 Mt CO₂; figure 2.2).





Progress to overall target

2.4. There was slow initial progress against obligations. However, as figure 2.3 shows, more than two thirds of the overall carbon savings were reported in the final six months of the programme (which lasted more than three years).



Figure 2.3 Progress to overall target

Schemes

- 2.5. Energy companies delivered measures through 491 schemes. Individual schemes were generally smaller than originally anticipated which meant energy companies had to deliver more schemes to meet their obligations.
- 2.6. Almost all CESP measures were delivered through partnerships with social housing providers (SHPs) or by direct promotion to private households (eg privately owned homes within social housing developments). Activity carried out in partnership with SHPs was the most popular delivery route but many schemes covered both delivery routes, often including the private householders that were located within predominantly social housing areas.
- 2.7. Figure 2.4 shows the distribution by size of scheme. About 65% of all schemes achieved a carbon saving of 25 thousand tonnes of carbon dioxide (kt CO_2) or less. This illustrates that the energy companies did not develop larger centralised schemes and had to carry out pockets of activity where the savings were lower.



Figure 2.4 Breakdown of scheme numbers by volume of savings

2.8. The number of schemes completed by each energy company is illustrated in figure 2.5.



Figure 2.5 Number of schemes completed by each energy company

Measures and dwellings

- 2.9. A total of 293,922 measures⁵ were installed in 154,364 dwellings. On average just under two measures were installed per property. Installation numbers by measure type are shown in figure 2.6.
- 2.10. Certain measures were incentivised through the provision of additional carbon savings (the individual measure adjustment). These measures were solid wall insulation, G-rated boiler replacements, renewable heat generation technologies and micro-combined heat and power (CHP).
- 2.11. Figure 2.6 shows that the incentive structure largely achieved its intention: external solid wall insulation and boiler replacements were the first and third most prevalent measures respectively.
- 2.12. Two principal measures in the CERT programme, cavity wall insulation and loft insulation, were disincentivised under CESP through a 50% reduction in carbon

 $^{^{\}rm 5}$ A full list of CESP-eligible measures is provided in Appendix 1

savings. The savings from these measures were also limited to 4% of a supplier or generator's obligation. $^{\rm 6}$

2.13. Cavity wall insulation numbers were relatively low suggesting that the carbon savings reduction was effective. Despite the savings reduction, loft insulation numbers were still relatively high. This may have been because loft insulation was installed as a secondary measure in order to trigger the whole house bonus. However, the carbon savings achieved did not exceed 4% of any supplier or generator's obligation.



Figure 2.6 Number of measures installed

⁶ A third measure, home energy advice packages, was also subject to a 1% limit

Bonus structure for multiple installations and area coverage

- 2.14. CESP incentivised the installation of multiple measures in a single dwelling and the treatment of as many dwellings as possible in a single low income area.
- 2.15. A whole house bonus was achieved if two or more measures were installed in a dwelling. The bonus was applied to the carbon saving of each measure installed⁷. 59.7% of dwellings received two or more measures and triggered a whole house bonus.
- 2.16. The effectiveness of the incentives and their impact upon the number of measures is discussed in Chapter 4.



Figure 2.7 Distribution of measures per dwelling

2.17. An area bonus was triggered if at least 25% of all the dwellings in a specific low income area were treated by the same supplier or generator. This occurred in 15.2% of the 1,954 low income areas containing a scheme (figure 2.8). However, 52.0% of the total dwellings treated under CESP were located in these areas (figure 2.9). This suggests that activity was concentrated in areas

⁷ This excluded district heating upgrades and home energy advice packages, neither of which could trigger a whole house or area bonus

where area bonuses could be achieved. The effectiveness of these incentives is discussed further in Chapter 4.

2.18. In carbon saving terms, 69.2% (11.28 Mt CO_2) of all savings arose from areas with an area bonus (figure 2.10).



Figure 2.8 Percentage of low income areas with area bonus

Figure 2.9 Percentage of dwellings with area bonus



Figure 2.10 Percentage of carbon savings in areas with area bonus



Regional analysis

2.19. Measures were installed in 1,954 eligible low income areas, 43.4% of the total. The number of low income areas with measures installed varied considerably across the regions (figure 2.11). The highest number of low income areas with measures installed was in the North West (378) and Scotland (375), whilst the South West had the fewest (28). The distribution of the number of dwellings treated broadly mirrors the distribution of the number of low income areas with measures installed. 2.20. However, there was an uneven distribution of eligible low income areas. In the South West there were 93 eligible areas, whereas in Scotland there were 976.

Figure 2.11 Number of low income areas with measures installed



2.21. Figure 2.12 shows the proportion of low income areas with measures installed. In East Midlands and Wales measures were installed in over 70% of CESPeligible areas, however, in London they were installed in only 24.2%.

Figure 2.12 Proportion of low income areas with measures installed



Measure types

2.22. In total 293,922 measures were installed under the programme (figure 2.13). In all regions the majority of installations were either insulation measures (8 regions) or heating measures (3 regions). Microgeneration measures were installed in all regions but in no region did they amount to more than 10% of the total measures installed. District heating measures featured in all but 3 regions.



Figure 2.13 Number of measures installed in each region

2.23. The regional distribution of CESP activity in the 11 regions of Great Britain is summarised in figure 2.14.



Figure 2.14 Regional distribution of CESP activity⁸

⁸ The total number of schemes reported in figure 2.14 is more than the number of schemes in paragraph 2.5 as some energy companies had schemes which covered more than one region

Trading and transfers

Trades

- 2.24. Under CESP suppliers and generators could trade up to 100% of their obligation with any other energy company, subject to Ofgem approval. The deadline for all applications to trade was 30 September 2012.
- 2.25. In total, 56 trades were approved. The majority of these trades were between licence holders from the same group of companies and were for administrative purposes. Three trades, totalling 2.3 Mt CO_2 were inter-group trades.
- 2.26. All trades flowed from generator to supplier, from supplier to supplier, or from generator to generator. There were no trades from supplier to generator.
- 2.27. Figure 2.15 shows the final net position of the suppliers' and generators' obligations after the completion of trades.



Figure 2.15 Supplier and generator obligations – effect of trading



Transfers

- 2.28. Energy companies were permitted to transfer completed measures, subject to Ofgem's approval. The deadline for all transfer applications was 31 December 2012.
- 2.29. Ofgem received a small number of requests for the transfer of measures, reflecting that few energy companies had an excess of completed activities they were able to pass to others. In total Ofgem approved 16 transfers, all of which were inter-group transfers.

3. Final energy company achievements

Chapter Summary

This chapter outlines the carbon savings achieved by each of the energy companies.

3.1. Figure 3.1 shows energy company compliance against the total obligations of the group. Each licence holder within an energy company must have achieved its obligation for that energy company to be shown as compliant. In the case of the vertically integrated energy companies the compliance status shown is based on the status of their generation and supply licences combined.

Vertically Integrated Energy Companies						
British Gas EDF Energy		E.ON	RWE npower	SSE	Scottish Power	
Non- compliant	Compliant	Compliant	Compliant	Non- compliant	Non- compliant	
62.4%	133.0%	116.5%	106.8%	90.9%	70.0%	
Independent Generators						
	Drax Power	Eggborough Power	GDF Suez/IPM	Intergen		
	Non- compliant	Compliant	Non- compliant	Non- compliant		
	37.1%	100.5%	38.6%	6.5%		

Figure 3.1 Compliance position by energy company

- 3.2. Four energy companies complied with all of their CESP obligations: EDF Energy, E.ON, RWE npower and Eggborough Power. Six energy companies did not comply: British Gas, SSE, Scottish Power, Drax Power, GDF Suez/IPM and Intergen.
- 3.3. The final compliance position of each obligated supplier and generator is listed in Appendix 2 of this report.
- 3.4. Energy companies adopted different approaches towards achieving their CESP obligations. Figure 3.2 shows how energy companies made use of the available bonuses in achieving carbon savings. Figure 3.3 summarises the activity that energy companies promoted.





Energy company	Measures	Dwellings ⁹	Schemes	Low income areas ¹⁰	Average measures per dwelling	Most installed measure type
British Gas	62,237	28,773	82	318	2.16	Heating
EDF Energy	42,399	25,119	83	359	1.69	Insulation
E.ON	44,056	24,572	37	268	1.79	Insulation
RWE npower	59,761	31,219	115	705	1.91	Heating
SSE	43,426	21,366	49	207	2.03	Insulation
Scottish Power	28,890	15,071	82	354	1.92	Heating
Drax Power	6,132	3,890	25	67	1.58	Insulation
Eggborough Power	2,275	1,144	1	6	1.99	Insulation
GDF Suez/IPM	3,244	2,907	7	73	1.12	District Heating
Intergen	1,502	1,052	10	24	1.43	Heating

Figure 3.3 Summary of energy company activity

3.5. Individual company approaches are discussed below.

⁹ The total number of dwellings reported in figure 3.3 is more than the number of dwellings in paragraph 2.9 as some properties were treated by more than one energy company ¹⁰ The total number of low income areas reported in figure 3.3 is more than the number in paragraph 2.17

as some areas had schemes from more than one energy company

Vertically integrated energy companies

British Gas

- 3.6. British Gas completed 82 schemes in 318 low income areas, delivering 62.4% of its obligations.
- 3.7. By June 2012 British Gas was the leading energy company with almost half of its obligations reached. While the other vertically integrated energy companies achieved at least 70% of their savings in the final six months, British Gas only achieved 24%.
- 3.8. British Gas installed 62,237 measures in 28,773 dwellings. This is the equivalent of 2.16 measures per property, the highest rate of all companies, suggesting British Gas particularly utilised the whole house bonus.
- 3.9. Almost 18% (57) of the 318 low income areas British Gas targeted triggered the area bonus.
- 3.10. British Gas, like other vertically integrated energy companies, concentrated mainly on insulation and heating measures. Of the measures British Gas installed, 44% were heating measures and 42% were insulation measures. It installed more district heating measures than any other energy company.



Figure 3.4 Number of measures installed by British Gas

EDF Energy

- 3.11. EDF Energy completed 83 schemes in 359 low income areas, delivering 133.0% of its obligations.
- 3.12. EDF Energy had delivered 37% of its obligations by June 2012, demonstrating similar progress to the other vertically integrated energy companies. In the final six months EDF Energy achieved additional savings equivalent to 96% of its obligations. This reflects a pipeline of works that reached fruition at the end of the programme.
- 3.13. EDF Energy installed 42,399 measures in 25,119 dwellings. This is the equivalent of 1.69 measures per dwelling, the lowest ratio of all the vertically integrated energy companies.
- 3.14. EDF Energy delivered schemes to 359 low income areas, with 49 of these areas triggering the area bonus. The individual measure adjustment accounted for the majority of EDF Energy's savings.
- 3.15. Insulation measures comprised 54% of all measures installed and heating measures comprised 33%. This followed the trend of heating and insulation measures being the most popular to install amongst the vertically integrated energy companies.



Figure 3.5 Number of measures installed by EDF Energy



E.ON

- 3.16. E.ON completed 37 schemes in 268 low income areas, delivering 116.5% of its obligations.
- 3.17. E.ON showed steady progress throughout the scheme and had achieved 36% of its obligations by June 2012. As was the trend with most of the other vertically integrated energy companies, the majority of savings were delivered in the final six months of the programme.
- 3.18. E.ON installed 44,056 measures in 24,572 dwellings, on average 1.79 measures per property.
- 3.19. E.ON installed measures in 268 low income areas. The area bonus was triggered in 55 of these areas. Of the vertically integrated energy companies, E.ON generated the largest percentage of its obligations through the individual measure adjustment (36.8%). However, it utilised the whole house bonus the least of the vertically integrated energy companies.
- 3.20. Insulation measures comprised 62% of measures installed, and heating measures comprised 32%. E.ON installed the most insulation measures of all the energy companies.



Figure 3.6 Number of measures installed by E.ON

RWE npower

- 3.21. RWE npower completed 115 schemes in 705 low income areas, nearly twice as many as any other energy company, and delivered 106.8% of its obligations.
- 3.22. Of the six vertically integrated energy companies, RWE npower accelerated the most in the final six months of the programme. With six months remaining, RWE npower had achieved 15% of its obligations, and by 31 December 2012 it had delivered 106.8%. This large acceleration in activity, and the significant number of low income areas targeted, suggests RWE npower took on a large number of small schemes that could deliver savings in a short timeframe to achieve its obligations.
- 3.23. RWE npower installed 59,761 measures in 31,219 dwellings. This is an average of 1.91 measures per dwelling and is in line with the average across all companies.
- 3.24. RWE npower delivered schemes in 705 low income areas. This was the largest number of areas treated by any energy company and was almost twice as many as the next highest number treated by an individual energy company. As a result of spreading their activity across so many low income areas the area bonus was only triggered in 7% of these areas, although the absolute number was equivalent to other energy companies.
- 3.25. Heating measures comprised 45% and insulation measures comprised 41% of the total measures installed. RWE npower installed the highest number of microgeneration measures of all the energy companies.



Figure 3.7 Number of measures installed by RWE npower



SSE

- 3.26. SSE completed 49 schemes in 207 low income areas, delivering 90.9% of its obligations.
- 3.27. SSE's progress was similar to the majority of energy companies. Having reached 29% of its obligations by June 2012, a further 62% was delivered in the final six months of the programme.
- 3.28. SSE installed 43,426 measures in 21,366 dwellings. This is an average of 2.03 measures per dwelling. SSE and British Gas were the only companies to deliver an average of more than two measures per dwelling.
- 3.29. SSE delivered schemes to 207 low income areas, with 56 areas triggering the area bonus.
- 3.30. Insulation measures comprised 56% of the total installed measures and heating measures comprised 33%.



Figure 3.8 Number of measures installed by SSE

Scottish Power

- 3.31. Scottish Power completed 82 schemes in 354 low income areas, delivering 70.0% of its obligations.
- 3.32. Scottish Power achieved 21% of its obligations by June 2012, with a further 49% delivered in the final six months.
- 3.33. Scottish Power installed 28,890 measures in 15,071 dwellings. This is an average of 1.92 measures per property and is broadly in line with the average across energy companies.
- 3.34. Scottish Power delivered schemes to 354 low income areas. It triggered the area bonus in 26 of these areas, the lowest number of all vertically integrated energy companies.
- 3.35. Insulation measures comprised 44% of the total measures installed, and heating measures comprised 45%. Scottish Power was the only energy company to claim behavioural measures, delivering home energy advice packages to domestic energy users in 94 dwellings.



Figure 3.9 Number of measures installed by Scottish Power

Independent generators

Drax Power

- 3.36. Drax Power completed 25 schemes in 67 low income areas, delivering 37.1% of its obligations.
- 3.37. Drax Power delivered the highest number of schemes of the independent generators, delivering the majority of its savings in the final six months.
- 3.38. Drax Power installed 6,132 measures in 3,890 dwellings. This is an average of 1.58 measures per property.
- 3.39. Drax Power delivered schemes in 67 low income areas, 5 of which benefited from the area bonus.
- 3.40. Insulation measures comprised 45% of the total installed measures, and heating measures comprised 38%.



Figure 3.10 Number of measures installed by Drax Power

Eggborough Power

- 3.41. Eggborough Power completed just 1 scheme in 6 low income areas, delivering 100.5% of its obligation. Eggborough had not delivered any of its obligation by December 2011. It was the only independent generator to comply with its obligation.
- 3.42. Eggborough Power delivered all of its obligation in the period after 31 December 2011, with the majority delivered in the final six months.
- 3.43. Eggborough Power installed 2,275 measures in 1,144 dwellings. This is an average of 1.99 measures per property.
- 3.44. Eggborough Power delivered schemes to 6 low income areas, with half of these triggering the area bonus.
- 3.45. Insulation measures comprised 79% of the total measures installed, and heating measures comprised the remainder.



Figure 3.11 Number of measures installed by Eggborough Power

GDF Suez/IPM

- 3.46. GDF Suez/IPM completed 7 schemes in 73 low income areas, delivering 38.6% of its obligations. The area bonus was not triggered in any of the low income areas treated.
- 3.47. GDF Suez/IPM had achieved 5% of its obligations by June 2012 and delivered the majority of its savings in the final six months.
- 3.48. GDF Suez/IPM installed 3,244 measures in 2,907 dwellings. This is an average of 1.12 measures per dwelling. This was the lowest average number of installations per dwelling by any energy company.
- 3.49. Unlike all other energy companies, GDF Suez/IPM did not concentrate on heating or insulation measures. It focussed mainly on district heating, which comprised 79% of the total measures installed.



Figure 3.12 Number of measures installed by GDF Suez/IPM



Intergen

- 3.50. Intergen completed 10 schemes in 24 low income areas, delivering 6.5% of its obligations.
- 3.51. Intergen installed 1,502 measures in 1,052 dwellings. This is an average of 1.43 measures per property.
- 3.52. Intergen delivered schemes in 24 low income areas. Only one area triggered the area bonus.
- 3.53. Heating measures comprised 57% of the measures installed and microgeneration measures comprised 27%.



Figure 3.13 Number of measures installed by Intergen

4. Carbon savings analysis

Chapter Summary

This chapter provides an analysis of unadjusted carbon savings, and how these savings have been increased through bonuses and uplifts. It also considers the effectiveness of the incentive structure in influencing energy companies to install particular measures and to achieve multiple installations in properties.

- 4.1. CESP was designed to encourage the installation of a package of energy saving measures to households in low income areas. It also aimed to promote more difficult-to-install and innovative measures than those promoted under the Carbon Emissions Reduction Target programme (CERT).
- 4.2. To achieve this, incentives were provided for certain activities:
 - carbon savings adjustments were applied to certain measures, such as solid wall insulation;
 - a whole house bonus was awarded to each measure when two or more measures were installed in a single property; and
 - an area bonus was awarded when 25% or more of the dwellings in a specific low income area were treated by the same supplier or generator.
- 4.3. In order to consider the effectiveness of the measure adjustments and whole house bonuses, it is necessary to analyse carbon savings pre-adjustment.

Unadjusted savings

4.4. Energy companies achieved 4.62 Mt CO_2 in unadjusted savings. This represents 28.3% of total adjusted savings (figure 4.1). This indicates that the incentives outlined above had a significant impact on energy company approaches.



Figure 4.1 Carbon savings before and after adjustments

4.5. Figure 4.2 shows the unadjusted savings by measure category. Insulation measures accounted for 56.9% (2,631 kt CO_2) of all unadjusted carbon

savings, with heating measures and district heating contributing 21.0% (970 kt CO_2) and 15.7% (725 kt CO_2) respectively. Figure 4.3 shows unadjusted savings by individual measure type.









- 4.6. External solid wall insulation (EWI) accounted for 85.9% (2.26 Mt CO₂) of insulation savings, and 48.9% of total unadjusted savings. There were 75,255 EWI installations under CESP, compared to 59,354 solid wall insulation installations (both internal and external) under CERT. The whole house bonus was applied to 60.2% of these installations. There were roughly 30,000 dwellings where external solid wall insulation was the only measure installed.
- 4.7. Given the whole house bonus for solid wall insulation was +50%, if the energy companies had installed at least one other measure in these properties they
would have made significant additions to their overall savings and, in some cases, significant inroads into their non-compliant position.

- 4.8. Fuel switching accounted for 56.1% (0.54 Mt CO₂) of all heating savings, and 11.8% of total unadjusted savings. Replacement boilers accounted for 41.7% (0.40 Mt CO₂) of heating savings, and 8.8% of total unadjusted savings.
- 4.9. Connections to a district heating system provided 50.5% (0.37 Mt CO₂) of district heating savings. There were 6,459 district heating connections under CESP, compared to 1,349 under CERT. The whole house bonus was applied to 5,996 (92.8%) of these installations.
- 4.10. Photovoltaic panels accounted for 84.1% (0.25 Mt CO_2) of microgeneration savings.
- 4.11. The impact of measure adjustments and the whole house bonus on unadjusted savings is analysed below. The analysis shows which incentives were most effective in driving energy company behaviour.

Individual measure adjustment

- 4.12. The individual measure adjustment was applied to four measure types: solid wall insulation, G-rated boiler replacements, renewable heat generation technologies and micro CHP. Two principal measures in the CERT programme, cavity wall insulation and loft insulation, were disincentivised in CESP through a negative adjustment.
- 4.13. For solid wall insulation the adjustment was set at +200%. This adjustment was clearly effective in promoting the installation of external solid wall insulation. There were significantly fewer installations of internal solid wall insulation. This may have been due to the disruption to the householder associated with these installations.
- 4.14. The individual measure adjustment was also effective in promoting the replacement of G-rated boilers (+50%). This measure was generally coupled with the installation of heating controls, as together these two measures would have triggered the whole house bonus.
- 4.15. Conversely, the +50% adjustment for renewable heat technologies and micro CHP was not effective in promoting these measures. This may be a reflection of the lack of penetration of these technologies in general.
- 4.16. Cavity wall insulation received a negative measure adjustment of -50%. Installation numbers were low, suggesting the adjustment was effective.
- 4.17. Loft insulation was installed in large numbers despite having a negative measure adjustment (-50%) applied. This may have been as a result of the whole house bonus, discussed below. Loft insulation could be installed in conjunction with solid wall insulation, unlike (in most cases) cavity wall insulation.

4.18. The carbon savings for loft insulation are relatively low compared with solid wall insulation and hence, despite the number of loft insulation jobs being about a third of the number of external solid wall insulation jobs, the unadjusted carbon savings achieved is about a twentieth.

Whole house bonus

- 4.19. The whole house bonus was triggered in 59.7% of the dwellings treated. However, in only 20.2% of dwellings were three or more measures installed.
- 4.20. The whole house bonus triggered by one measure was applied to all other measures installed in the same property. Given the way the incentive accelerated it is surprising so many dwellings received only two measures.
- 4.21. Four of the six most installed measures (heating controls, draught proofing, double glazing and loft insulation) achieved relatively low savings when installed on their own. Their ability to trigger the whole house bonus (+10% for each measure) may have been the motivation for their installation.
- 4.22. The whole house bonuses applicable to solid wall insulation (+50%) and replacement of G-rated boilers (+40%) will have reinforced the incentive provided by the individual measure adjustment for these measures.
- 4.23. Fuel switching and district heating connections were promoted in relatively high numbers, suggesting the whole house bonus of +40% was effective. Conversely, a similar bonus for biomass boilers was not sufficient to incentivise a significant number of installations.

Effectiveness of incentives

- 4.24. That 71.7% of the overall savings were achieved through bonuses clearly demonstrates the effectiveness in driving energy company approaches. However, as shown above, these incentives were not equally attractive across measure types. Moreover, the whole house bonus could have been utilised to a greater extent, by application to more dwellings, and through the installation of more measures per dwelling.
- 4.25. Furthermore, as seen in Chapter 2, although nearly two thirds of all carbon savings arose from low income areas where an area bonus was triggered, in fact only 15% of the 1,954 areas targeted under CESP attracted the area bonus. Further concentration of activities in specific areas would have allowed the companies to take further advantage of this bonus.

5. Monitoring progress

Chapter Summary

This chapter describes the mechanisms put in place to ensure installed measures met appropriate technical standards, and that completed measures had been reported to Ofgem correctly.

Technical monitoring

- 5.1. Technical monitoring was a key control in CESP to ensure measures installed met the relevant quality standards and carbon savings claimed by energy companies could be fully achieved.
- 5.2. Energy companies were required to undertake monitoring on at least 5% of each measure installed using a suitably qualified monitoring agent. Only professionally installed insulation and heating measures required technical monitoring. The monitoring sample was selected in a random manner.
- 5.3. To maintain consistency, properties were inspected using standard technical monitoring questions developed by Ofgem to ensure compliance with CESP legislation and guidance. These questions were also used in the Carbon Emissions Reduction Target (CERT) scheme. The questions covered a range of topics for each measure type and failures could relate to customer satisfaction, health and safety, legal or building regulations, as well as carbon savings achieved.
- 5.4. Energy companies were required to report a summary of their technical monitoring results at scheme closure. These results have been aggregated per measure type and can be found in figure 5.1¹¹.

¹¹ Technical monitoring of microgeneration measures was achieved through the Microgeneration Certification Scheme (MCS). The technical monitoring questions for district heating, included in the CESP Guidance, were answered through the feasibility studies and field trials completed by the energy companies

Measure	Percentage of each measure technically monitored	Percentage of monitored measures failing technical monitoring
Loft insulation	8.6%	4.3%
Flat-roof insulation	10.3%	0.0%
Cavity wall insulation	7.7%	1.2%
Solid wall insulation	8.7%	1.1%
Draught proofing	6.4%	0.4%
Glazing	7.0%	0.1%
Under-floor insulation	6.0%	0.0%
Replacement boiler	7.4%	0.1%
Heating controls	7.0%	0.3%
Fuel switching	8.2%	1.7%

Figure 5.1 Aggregated technical monitoring results

- 5.5. Figure 5.1 shows that for all measure types the technical monitoring carried out was above the required 5%, demonstrating energy companies' commitment to installing measures to the required standards.
- 5.6. Reported failure rates for the different measure types ranged from 0% to 4.3%, with the majority of failure rates reported below 1%. All of the measures identified as failing technical monitoring were required to have remedial action completed to ensure compliance with the CESP guidance.
- 5.7. Loft insulation measures reported the highest failure rate at 4.3%. It is likely that this higher failure rate is due to instances where the work required is not feasible. For example, the loft hatch not being draught-proofed or insulated could result in a technical monitoring fail, however, doing this may restrict the function of the hatch and/or loft ladder.

Audits

- 5.8. Auditing was a very important aspect of CESP administration and helped to ascertain whether the programme was being delivered effectively and in accordance with the legislation.
- 5.9. Throughout the programme, Ofgem commissioned independent auditors to carry out audits on all energy companies. The audit programme consisted of both technical and desk-based audits, and followed a risk-based approach.
- 5.10. Key findings from the audits included:
 - A formal de-duplication process for CESP measures was slow to be implemented by energy companies, however, all required measures were subject to de-duplication prior to scheme completion.
 - In some instances, technical monitoring plans for CESP measures were slow to be implemented.

- Recommendations were made to some energy companies, based on the findings from the audits, to improve or formalise the management of their third party contractors.
- Energy companies had a mixture of automatic and manual processes for managing their CESP obligations.

In addition, a number of improvements were recommended to energy companies' internal processes for managing CESP.

- 5.11. Ofgem shared the audit findings with energy companies to ensure that recommendations raised by auditors were implemented effectively.
- 5.12. The results of the audit programme provided assurance that:
 - Measures being delivered were as claimed and to sufficient standard;
 - Energy companies had adequate processes in place for reporting to Ofgem;
 - Energy companies had adequate processes in place for managing third party contractors;
 - Energy companies had adequate processes in place for de-duplication of measures between CESP and other energy efficiency schemes.

6. Conclusions

Chapter Summary

This chapter considers the final position achieved by the energy companies, and discusses the approaches employed and the challenges encountered in trying to achieve the legislative obligations and targets. It examines the CESP policy intention, the aspects that were not fully realised and those that were successful. It also considers how learnings from CESP have helped to influence the design of future programmes.

- 6.1. Of the overall CESP target, 84.7% was achieved. Of the ten energy companies obligated under CESP, only four met all of their obligations.
- 6.2. As shown in Chapter 3, all energy companies, with the exception of British Gas, made slow initial progress against their obligations. The main activity took place in 2012, particularly in the final six months of the programme. Despite strong efforts, this late surge in activity was not sufficient for the majority of energy companies to meet their obligations. Some non-compliant energy companies have taken steps to mitigate their shortfall after the end of the obligation period.

Energy company approaches

- 6.3. Each of the four companies who met all of their obligations (E.ON, EDF Energy, RWE npower and Eggborough Power) made slow starts. Of particular note are RWE npower and EDF Energy. RWE npower had achieved only 15% of its obligations with six months remaining yet managed to deliver 106.8% of its obligations by 31 December 2012, while EDF Energy achieved savings equivalent to 96% of its obligations in the final six months.
- 6.4. Eggborough delivered the majority of work in the latter stages of the programme. Eggborough experienced a delayed start in activity, having been divested by EDF Energy. Despite this, it delivered just over 100% of its obligation, achieved through one individual scheme. This scheme was focussed on insulation measures, heavily utilising the individual measure adjustment and whole house bonus.
- 6.5. It is difficult to draw strong conclusions on what was a 'successful' approach for achieving obligations. As shown in Chapter 3, there was considerable variation across both compliant and non-compliant energy companies in the ratio of measures, dwellings, schemes and low income areas treated. For instance, E.ON and EDF Energy both met their obligations and treated a similar number of dwellings during the programme but EDF Energy delivered well over twice as many schemes.
- 6.6. The key correlation across the energy companies who met their obligations relates to bonuses. As illustrated in figure 3.2, three of these four energy companies (E.ON, EDF Energy, and Eggborough Power) delivered a lower proportion of their obligations through unadjusted savings. They tended to utilise the individual measure adjustment to a greater extent than the other six

companies. The significant increase to savings that this adjustment could offer for certain measures, and the fact that it was the initial savings multiplier before the whole house and area bonuses were applied, may have caused this approach to be particularly successful.

6.7. As discussed above, Eggborough Power achieved its obligation through the delivery of one scheme. It was the only generator to meet its obligations. Given that CESP was the first programme under which generators were obligated, most used the strategy of trading their obligations to vertically integrated energy companies and employing third parties to deliver their activity.

Effectiveness of scheme design and delivery of policy intent

- 6.8. The bonus structure of CESP was designed to incentivise the installation of certain measures using a house by house, street by street approach. The bonuses can clearly be seen to have driven the activity and approaches of the energy companies, with 71.7% of all savings achieved coming from such bonuses.
- 6.9. CESP was particularly effective in incentivising the treatment of properties of solid wall and non-traditional construction (which can be of poor quality and energy performance). External solid wall insulation was installed in large volumes (75,255 measures). The individual measure adjustment of +200% may have been the driver for this. The substantial costs involved in improving such homes and the (often property-specific) technical complexities involved in their treatment meant that such properties, although constituting a relatively large proportion of the housing stock of Great Britain, were often not targeted under previous energy efficiency programmes. CESP, through its bonus structure, was effective in addressing this issue.
- 6.10. The structure of CESP also provided effective incentives for the installation of district heating measures. The number of measures, and (unadjusted) carbon savings achieved by those measures, far exceeded those in other government energy efficiency programmes. Therefore, CESP drove an expansion in district heating uptake that would not have been achieved otherwise.
- 6.11. However, not all bonuses were utilised to the extent that was hoped and ultimately this may have been a factor in the failure of some energy companies to meet their obligations.
- 6.12. The whole house bonus was effective in that 59.7% of dwellings received more than one measure. However, it is notable that almost 30,000 external solid wall installations were not accompanied by a second measure. Furthermore, the increase in savings available from installing more than two measures was not as effective, with only 20.2% of dwellings receiving three or more measures. The average number of measures installed per dwelling was just under two, and there was little variation from this average by any energy company.
- 6.13. The area bonus, intended to promote high penetration in areas of low income, does not appear to have delivered the desired patterns of activity. The bonus was only triggered in 15.2% of eligible low income areas, much lower than intended. However, this did encompass 52.0% of all dwellings treated and

69.2% of all carbon savings were achieved in areas where the area bonus was triggered.

6.14. A number of factors may have inhibited the utilisation of this bonus. For example, the boundaries of low income areas were often not in line with those of communities and estates. An estate treated under a CESP scheme could straddle multiple areas of low income. Therefore, a supplier or generator could treat a large number of dwellings in a particular locality yet fail to trigger the area bonus in any overlapping low income area. In addition, the number of social housing providers (SHPs) operating in an individual low income area may have been a deterrent for the treatment of the number of dwellings necessary to trigger the area bonus, due to complexities in setting up multiple contracts and commercial arrangements.

Challenges

- 6.15. There were several challenges, both administrative and technical, that initially affected the progress of the energy companies.
- 6.16. The scoring of activity under CESP made it difficult for energy companies to accurately gauge the level of activity required to meet their obligations. Any change to a scheme could have an impact on eventual scheme carbon savings. For example, the discovery that a property had a different construction type than expected could impact on savings, especially if it was reclassified from solid wall insulation (with a +200% measure adjustment) to cavity wall insulation (with a -50% measure reduction).
- 6.17. By the end of the programme almost 500 schemes were completed. These schemes varied significantly in scale but each required similar administrative effort. Whilst, on occasion, the energy companies were able to utilise economies of scale associated with larger schemes, the general picture was that schemes were smaller than anticipated.
- 6.18. Given that CESP was designed to promote the installation of specific measures in hard-to-treat properties, it was inevitable that some technical difficulties would arise. However, the number and complexity of technical issues encountered was unanticipated. These issues included:
 - Clarifying how the suitability of solid wall insulation systems could be demonstrated;
 - Formulating the criteria required to be met for energy companies to claim solid wall insulation as a means of insulating hard-to-treat cavities;
 - Establishing what starting U-values to use for the wide variety of construction types in the score calculations;
 - Determining how to calculate the savings for partial or 'non-standard' measure installations, where the unadjusted score was recalculated based on the proportion of the depth or area treated;

- Calculating bespoke scores and assessing technical specifications for district heating connections and upgrades.
- 6.19. Ofgem, DECC and the energy companies worked closely together to tackle the technical issues encountered and to try to reach robust and agreeable solutions. In order to facilitate this, a Technical Working Group was set up by Ofgem in 2011. This group resolved many of the technical issues encountered under CESP, and the Ofgem Centre of Technical Excellence (established in mid-2012) continued to build on this work throughout the remainder of the programme. This partly reflects why energy companies were able to accelerate progress in the final six months.
- 6.20. During the final year, Ofgem undertook a number of activities designed to aid and encourage delivery by energy companies. These included:
 - Requiring energy companies to report progress on a monthly basis from January 2012 onwards, including forecasts of final position;
 - Holding monthly meetings with energy companies to resolve issues and highlight problems promptly;
 - Issuing open letters from September 2012 indicating our approach to enforcement for energy companies who do not meet their obligations.

CESP achievements

- 6.21. Although energy companies did not meet the overall CESP target, the shortfall of 15.3% was less than may have been predicted in June 2012, when only 31.6% of the overall target had been met. The challenges described above certainly affected delivery. That four energy companies met all of their obligations shows that compliance was possible, given an appropriate strategy.
- 6.22. The measures installed by energy companies delivered real carbon savings to 154,364 dwellings in low income areas. The majority of these properties were hard-to-treat and therefore may not have received measures under a less targeted energy efficiency scheme (such as CERT). In this respect, CESP can be considered a success.
- 6.23. CESP was an innovative programme which trialled a number of policy features, such as the bonus system and the focus on certain deprived areas. The relative effectiveness of these policies and lessons learned have influenced the design of the successor programme to CESP, the Energy Companies Obligation (ECO).



Appendices

Index

Appendix	Name of Appendix	Page number
1	Qualifying actions	47
2	Supplier and generator licences and compliance status	48
3	Individual and whole house bonuses	51
4	Glossary	52
5	The Authority's powers and duties	55



Appendix 1 – Qualifying actions

Qualifying actions (measures) as described in this report are outlined in the table below.

Measure Type	Measure	
	Loft insulation	
	Cavity wall insulation	
	Solid wall insulation (external)	
Insulation	Solid wall insulation (internal)	
	Draught proofing	
	Double glazing	
	Flat-roof insulation	
	Under-floor insulation	
	Replacement boiler	
Heating	Heating controls	
	Fuel switching	
	Connection to a district heating scheme	
District heating	Upgrade of a district heating scheme	
	District heating meter for individual house billing	
Behavioural	Home energy advice package	
	Heat pump	
	Biomass boiler	
	Solar hot water	
	Other microgeneration (heat)	
Microgeneration	Solar PV	
	Wind turbine	
	Micro-hydro	
	Other microgeneration (electricity)	
	Micro-CHP	

Appendix 2 – Supplier and generator licences and compliance status

Suppliers and generators obligated under the Order, as at 14 March 2012, are listed below, together with their final compliance position. This has been assessed taking into account any trades of obligations and transfers of completed actions.

Suppliers

Group Name	Licence Holder	Product supplied	Compliant with obligation
Centrica plc	British Gas Trading Ltd	Electricity	Non-compliant
	British Gas Trading Ltd	Gas	Compliant
	EDF Energy Customers plc	Electricity	Compliant
	SEEBOARD Energy Limited	Electricity	Compliant
EDF Energy	SWEB Energy Limited	Electricity	Compliant
	EDF Energy Customers plc	Gas	Compliant
	SEEBOARD Energy Gas Limited	Gas	Compliant
	E.ON Energy Limited	Electricity	Compliant
	Economy Power Limited	Electricity	Compliant
E.ON UK plc	E.ON Energy Limited	Gas	Compliant
	E.ON Energy Gas (Eastern) Limited	Gas	Compliant
	Npower Limited	Electricity	Compliant
	Npower Northern Supply Limited	Electricity	Compliant
	Npower Northern Limited	Electricity	Compliant
	Npower Yorkshire Supply Limited	Electricity	Compliant
	Npower Direct Limited	Electricity	Compliant
	Electricity Plus Supply Limited	Electricity	Compliant
	Npower Yorkshire Limited	Electricity	Compliant
RWE npower plc	Npower Gas Limited	Gas	Compliant
	Npower Commercial Gas Limited	Gas	Compliant
	Npower Northern Limited	Gas	Compliant
	YE Gas Limited	Gas	Compliant
	Npower Direct Limited	Gas	Compliant
	Gas Plus Supply Limited	Gas	Compliant
	Npower Yorkshire Limited	Gas	Compliant
Scottish Power Ltd	Scottish Power Energy Retail Limited	Electricity	Compliant



Group Name	Licence Holder	Product supplied	Compliant with obligation
	Scottish Power Energy Retail Limited	Gas	Non-compliant
	SSE Energy Supply Limited	Electricity	Non-compliant
	South Wales Electricity Limited	Electricity	Compliant
	Southern Electric Gas Limited	Gas	Non-compliant
SSE plc ¹²	SWALEC Gas Limited	Gas	Compliant
	Atlantic Gas Limited	Gas	N/A
	Scottish Hydro Electric Gas Limited	Gas	N/A

Generators

Group Name	Licence Holder	Compliant with obligation
	Centrica Barry Limited	Compliant
	Centrica Brigg Limited	Compliant
	Centrica KL Limited	Compliant
	Centrica KPS Limited	Compliant
Centrica plc	Centrica Langage Limited	Compliant
	Centrica PB Limited	Compliant
	Centrica RPS Limited	Compliant
	Centrica SHB Limited	Compliant
	Lincs Wind Farm Limited	Compliant
Drax Group plc	Drax Power Limited	Non-compliant
Eggborough Power Limited	Eggborough Power Limited	Compliant
	EDF Energy Nuclear Generation Limited	Compliant
	EDF Energy (Jade Power Generation Limited)	Compliant
EDF Energy	EDF Energy (Sutton Bridge Power Limited)	Compliant
	West Burton Limited	Compliant
	British Energy Generation (UK) Limited	Compliant
	EDF Development Company Limited	Compliant
	EDF Energy (West Burton Power) Limited	Compliant
	NNB Generation Company Limited	Compliant
	E.ON UK plc	Compliant
E.ON UK	Citigen (London) Limited	Compliant
	Enfield Energy Centre Limited	Compliant

¹² Both Atlantic Gas Limited and Scottish Hydro Electric Gas Limited were dissolved on 23 November 2012. As such their supply licences fell away. Both companies had zero obligation at the time of dissolution

Group Name	Licence Holder	Compliant with obligation
	GDF Suez Teeside Limited	Compliant
GDF Suez SA ¹³	GDF Suez Shotton Limited	Compliant
	GDF Suez Marketing Limited	Compliant
	Rugeley Power Generation Limited	Non-compliant
	Indian Queens Power Limited	Compliant
	Saltend Cogeneration Company Limited	Non-compliant
IPM (UK) Power	Deeside Power Limited	Non-compliant
	First Hydro Company	Compliant
	International Power plc	Compliant
	IPM Energy Trading Limited	Compliant
Internen Drejecte	Rocksavage Power Company Limited	Non-compliant
Intergen Projects (UK) Limited	Coryton Energy Company Limited	Non-compliant
	Spalding Energy Company Limited	Non-compliant
	RWE npower plc	Compliant
DWE prower plc	Npower Cogen Trading Limited	Compliant
RWE npower plc	Gwynt Y Mor Offshore Wind Farm Limited	Compliant
	NPower Direct Limited	Compliant
	SSE Generation Limited	Compliant
	SSEPG (Operations) Limited	Non-compliant
	Medway Power Limited	Non-compliant
	Keadby Generation Limited	Non-compliant
	Fibre Power (Slough) Limited	Compliant
SSE plc	Greater Gabbard Offshore Wind Farm Limited	Non-compliant
	Uskmouth Power Company Limited	Non-compliant
	Keadby Developments Limited	Compliant
	Clyde Wind Farm (Scotland) Limited	Non-compliant
	Griffin Wind Farm Limited	Non-compliant
	Galloper Wind Farm Limited	Compliant
	ScottishPower Generation Limited	Non-compliant
ScottishPower	ScottishPower (DCL) Limited	Compliant
Generation Limited	ScottishPower (SCPL) Limited	Compliant
	ScottishPower Renewables UK Limited	Compliant

¹³ Following the completion of the acquisition of International Power by GDF SUEZ in June 2012, International Power has been rebranded as GDF SUEZ Energy International. Under the deal a number of GDF assets transferred into IPM. The above table shows the pre-merger composition of each group

Appendix 3 - Individual and whole house bonuses

Description of qualifying action	Individual measure adjustment	Whole house bonus
Cavity wall insulation	-50%	+10%
Connection to a district		
heating scheme	0%	+40%
District heating meter for		
individual house billing	0%	+10%
Double glazing	0%	+10%
Draught proofing	0%	+10%
Flat-roof insulation	0%	+10%
Fuel switching	0%	+40%
Heat pump	+50%	+50%
Heating controls when		
provided with a new		
heating system	0%	+10%
Loft insulation	-50%	+10%
Replacement boiler	+50%	+40%
Solid wall insulation		
(external)	+200%	+50%
Solid wall insulation		
(internal)	+200%	+50%
Under-floor insulation	0%	+10%
Biomass boiler	+50%	+40%
Micro combined heat and		
power unit	+50%	+10%
Micro Hydro unit	0%	+10%
Micro Wind unit	0%	+10%
Mini-wind unit	0%	+10%
Photovoltaic panels	0%	+10%
Solar water heater	+50%	+10%

Appendix 4 - Glossary

A

Adjusted CO₂ savings

Carbon dioxide reduction arising from qualifying actions as determined by applying the appropriate carbon coefficient values as set out in Schedule 3 of the Order and subsequently adjusted as described in articles 24 and 25 of the Order (adjustments and bonuses)

Achieved savings

Achieved carbon savings were calculated based on the CESP carbon saving score and lifetime of the measure. Achieved carbon savings were used to meet energy companies' obligations

С

CERT

Carbon Emissions Reduction Target (CERT) 2008- 2012

CESP

Community Energy Saving Programme (CESP) 2009 - 2012

CHP

Combined heat and power

CO₂

Carbon dioxide

D

Data Zone

The equivalent in Scotland of a Lower Super Output Area in England and Wales

DECC

Department of Energy and Climate Change

De-duplication

A process carried out by energy companies to ensure that each measure that was professionally installed was only counted once



Е

ECO

The Energy Companies Obligation (January 2013 – March 2015), requires gas and electricity suppliers to achieve 20.9 Mt CO_2 of carbon savings towards a Carbon Emissions Reduction Obligation, 6.8 Mt CO_2 of carbon savings towards a Carbon Saving Community Obligation, and £4.2 billion of cost savings towards a Home Heating Cost Reduction Obligation

Energy company activity

Energy efficiency work undertaken by energy companies to meet the Communities Energy Saving Programme

Excess Actions

Measures delivered under CESP with carbon savings which may be considered excess to an obligation. These may be carried forward into ECO if certain requirements are met

F

Fuel switching

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

Ι

IMD

Index of Multiple Deprivation

Κ

Kt CO₂

Thousand tonnes of carbon dioxide

L

LSOA

Lower Super Output Area – a geographical unit developed following the 2001 census to facilitate the calculation of indices of deprivation



М

Microgeneration

Under the terms of CESP, microgeneration measures included 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

Mt CO₂

Million tonnes of carbon dioxide

0

Order, The

The Electricity and Gas (Community Energy Saving Programme) Order 2009

Ρ

PV

Photovoltaics

U

U-value

The measure in W/m²K of heat transmission through material

Unadjusted CO₂ savings

Carbon dioxide reduction arising from qualifying actions as determined by applying the appropriate carbon coefficient values as set out in Schedule 3 of the Order but before any specific measures adjustments or bonuses have been applied

V

Vertically Integrated Energy Companies

The energy companies that have obligated subsidiaries with both supply (gas or electricity) and generation licences

Appendix 5 – 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 (such as the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002, the Energy Acts of 2004, 2008 and 2010 and the Energy Bill 2012) as well as arising from directly effective European Community legislation.
- 1.3 References to the Gas Act and the Electricity Act in this appendix are to Part 1 of those Acts.¹⁴ 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.¹⁵
- 1.4 The Authority's principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interests taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them.
- 1.5 The Authority is generally required to carry out its functions in the manner it considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition between persons engaged in, or commercial activities connected with,
 - the shipping, transportation or supply of gas conveyed through pipes;
 - the generation, transmission, distribution or supply of electricity;
 - the provision or use of electricity interconnectors.
- 1.6 Before deciding to carry out its functions in a particular manner with a view to promoting competition, the Authority will have to consider the extent to which the interests of consumers would be protected by that manner of carrying out those functions and whether there is any other manner (whether or not it would promote competition) in which the Authority could carry out those functions which would better protect those interests.

¹⁴ Entitled "Gas Supply" and "Electricity Supply" respectively

¹⁵ 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



1.7 In performing these duties, the Authority must 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 them¹⁶; and
- the need to contribute to the achievement of sustainable development.
- 1.8 In performing these duties, the Authority must have regard to the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹⁷
- 1.9 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:
 - promote efficiency and economy on the part of those licensed¹⁸ 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,

and shall, in carrying out those functions, have regard to the effect on the environment.

- 1.10 In carrying out these functions the Authority must also have regard to:
 - 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.
- 1.11 The Authority may, in carrying out a function under the Gas Act and the Electricity Act, have regard to any interests of consumers in relation to communications services and electronic communications apparatus or to water or sewerage services (within the meaning of the Water Industry Act 1991), which are affected by the carrying out of that function.

¹⁶ 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 Acts in the case of Electricity Act functions
¹⁷ The Authority may have regard to other descriptions of consumers

¹⁸ Or persons authorised by exemptions to carry on any activity



1.12 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 Regulation19 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.

¹⁹ Council Regulation (EC) 1/2003