Environment Agency

Climate Change Agreements: biennial progress report 2015 and 2016

Version 1: 16 November 2017

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can’t do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

Published by:

Environment Agency
Horizon House, Deanery Road,
Bristol BS1 5AH
Email: enquiries@environment-agency.gov.uk
www.gov.uk/environment-agency

Further copies of this report are available from our publications catalogue:
www.gov.uk/government/publications

or our National Customer Contact Centre:
T: 03708 506506

Email: enquiries@environment-agency.gov.uk.

Executive summary

Climate Change Agreements (CCAs) are voluntary agreements under which operators of facilities in certain energy intensive sectors can receive a discount on the Climate Change Levy (CCL). We, the Environment Agency, fulfil the role of scheme administrator on behalf of the Department for Business, Energy and Industrial Strategy (BEIS).

This is our second biennial report and it sets out the energy efficiency improvements and emission reductions achieved by operators and sectors against their CCA targets. It covers the second target period (TP2) of the CCA scheme, from 1 January 2015 to 31 December 2016. The report for the first target period (TP1) can be seen on GOV.UK.

The scheme includes 53 sectors holding 'umbrella agreements' containing sector commitments agreed with the Department of Energy and Climate Change (DECC), now BEIS. Individual operators hold 'underlying agreements' with targets for their 'target units' comprising one or more specific facilities. At the end of TP2 (31 December 2016), there were 3,186 target units covering 7,816 facilities in the scheme. These figures are lower when compared to 3,416 target units covering 7,853 facilities at the end of the first target period (TP1) on 31 December 2014. Operators left voluntarily, for example because they considered that the scheme was not cost effective for them, they ceased trading or they had closed individual facilities.

Of the sectors participating in the scheme, 40 met their sector commitments, 9 did not, and 4 did not have any operators reporting in TP2. In contrast to the position for operators holding underlying agreements, there are no direct consequences for sectors over or under-performing against their sector commitments. The purpose of the sector commitments is to provide a basis for setting individual targets in the underlying agreements.

Individual operators had to submit their performance reports by 1 May 2017. Over 99% of the submissions met this deadline. The reports showed that 53% of the target units met or over-performed against their targets and 47% under-performed. This compares with 51% over-performing and 49% under-performing in our first biennial report.

There are 2 mechanisms for operators whose target units did not meet their targets to remain compliant with the scheme and hence eligible for the reduced rates of CCL. These are the:

- use of banked surplus accrued through over-performance during TP1
- the payment of a 'buy-out fee' of £12 per tonne of carbon dioxide equivalent (CO_2e)

Banked surplus must be used when available and 155 targets units (4.9%) used some or all of their surplus to offset their under-performance in TP2. A buy-out fee was paid for 1,216 target units with £22.2 million paid to the government account, an increase of £0.1 million over TP1. Overall, 7,920 facilities (99.6%) were recertified to continue to receive the reduced rates of CCL.

Total emissions from all facilities in TP2 were slightly lower than TP1, reduced from 45.7 million tonnes of CO_2e down to 45.5 million tonnes of CO_2e. Combining all the individual over and under-performance, there was a net over-performance of 3.2 million tonnes of CO_2e. This means that emissions were 3.2 million tonnes of CO_2e lower than required to meet the targets alone. This is an increase in net over-performance of 1.1 million tonnes of CO_2e when compared with TP1.

Measured against the base year (mostly 2008), unadjusted emissions over TP2 were reduced by about 4.9 million tonnes of CO_2e, which is a fall of 10%. This is lower than the 6.2 million tonnes of CO_2e (12%) reduction in TP1. However, the adjusted emissions reduction, taking account of throughput changes, was about 7.8 million tonnes of CO_2e. This has increased from the 5.6 million tonnes of CO_2e reduction experienced in TP1.

We derived the figures in this report using the information submitted by operators. Our report does not consider the extent to which the changes in emissions can be attributed to participation in the CCA scheme or other drivers. A range of factors including commercial incentives may affect participants' energy use and emissions.

Contents

1. Introduction

1.1. Overview of the CCA scheme

The CCA scheme aims to protect industry sectors where competiveness may be affected by tax costs and to incentivise improvements in energy efficiency and carbon reduction. CCAs are voluntary and allow operators of eligible facilities in some energy intensive sectors to receive a discount on the CCL: up to 90% for electricity and 65% for gas and other fuels.

CCAs are a combination of umbrella agreements between sector associations and the Environment Agency, and underlying agreements between operators and the Environment Agency. The 53 umbrella agreements each include a sector commitment of an energy efficiency improvement or carbon reduction target for the sector. The sector targets were agreed between the former Department of Energy and Climate Change (DECC), now the Department for Business Energy and Industrial Strategy (BEIS), and the sector associations.

Underlying agreements identify the operator's facilities covered by the agreement and include overall energy efficiency or carbon reduction targets for those facilities. The facilities covered by an underlying agreement are collectively known as the 'target unit'. Both types of agreement cover 4 target periods, each 2 years long, running from 1 January 2013 to 31 December 2020.

Those who meet or exceed their target remain eligible to claim the CCL discount. Those who do not must use any banked surplus accrued through over-performance during TP1 and may choose to pay a fee to government if they wish to continue to claim the CCL discount. For TP1 and TP2 this 'buy-out' fee was calculated as £12 per each tonne of CO_2e by which they missed their target after any banked surplus is taken in to account.

The targets are set against a base year which is specific to each sector and target unit. Where possible, 2008 is used as the base year, but if data is not available a more recent year may be used.

1.2. The biennial progress report

This document reports the energy efficiency improvements and emission reductions achieved by operators and sectors against their targets for TP2, 1 January 2015 to 31 December 2016. It is published in accordance with regulation 9 of the Climate Change Agreements (Administration) Regulations 2012 (as amended) and takes account of government's response to comments received for its consultation on the publication of target unit performance data.

This report only covers energy use that is subject to a CCA which may not be all the energy used in facilities. We took the data from operators' reports which were submitted to us by 1 May 2017 and buy-out fees received by 1 July 2017. Any later corrections or payments are not included in this report. The data used is supplied by the participating operators and they are responsible for the quality of their own submissions. We provided advice to sector associations on how they could check their operators' reports.

This report is comprised of:

- data tables containing information for each target unit and sector
- a narrative report (this document) to provide a summary of the scheme, and the sector and target unit performance

1.3. Significant events

1.3.1. Government reviews

In August 2016, following publication of an earlier discussion paper and Government Response, BEIS produced a further discussion paper on the target review 2016 and buy-out price review. The review found limited evidence of changes relating to the realistic potential for energy efficiency or carbon savings since 2012. Accordingly, the department announced that it had decided not to take sectors forward for detailed target review. BEIS decided to increase the amount of the buy-out fee in line with inflation to £14 per tonne CO_2e for TP3 and TP4.

During 2015, government reviewed and consulted on [reforming the business energy efficiency tax landscape] to simplify and improve its effectiveness. In March 2016 the government announced that it will keep the existing CCA scheme eligibility criteria in place until at least 2023. The main rates of the CCL will increase from April 2019 as a consequence of CRC closure but the discount available to CCA participants will also increase to ensure fiscal neutrality.

1.3.2. Data corrections by operators

Our first biennial report for TP1 was a 'snapshot' of the scheme's performance at that moment in time. Since it was published there were around 250 data corrections submitted by participating operators. As a result, we have applied the corrections to individual target units, adjusting banked surplus and buy-out fees due as required. However, following our original intentions, the data in the TP1 report remains unchanged and has not been updated to reflect later corrections.

1.3.3. Appeals

There were 3 appeals against buy-out fees in TP1. One appeal was upheld regarding how targets are calculated for facilities that leave the scheme. Consequently, we reviewed the way targets are calculated in these cases and changed our processes to remove any similar issues.

2. Commentary

2.1. Summary of results for the second target period

Since April 2015, there has been a gradual reduction in the number of target units and facilities in the CCA scheme.

During TP2, between 1 January 2015 and 31 December 2016, 929 facilities exited the scheme and 882 entered the scheme.

At the end of TP2 (31 December 2016), there were 3,184 target units covering 7,814 facilities for which we expected to receive reports. This compared with 3,416 target units covering 7,863 facilities at the end of TP1. We have excluded data for TP2 relating to one single facility operator who has appealed our decision of their progress and one single facility operator who submitted a null response report from the data spreadsheet.

By 1 May 2017, reports were received for 3,153 (99%) of these target units.

The lime, slag grinding, mineral wool and gypsum products sectors did not have any operators required to report for TP2.

The total reported CO_2e emissions under the CCA scheme in TP2 was 45.5 million tonnes, compared with 45.7 million tonnes reported in TP1.

The number of target units which met their target was 1,678 (53%) and covered 3,566 facilities. This compares with 1,743 target units (51%) covering 3,063 facilities in TP1. For these target units:

- the average surplus gained per target unit was 3.4 thousand tonnes of CO_2e (2 thousand tonnes of CO_2e in TP1)
- the maximum surplus for a target unit was 506 thousand tonnes of CO_2e (170 thousand tonnes of CO_2e in TP1)
- the total surplus for TP2 was 5.7 million tonnes of CO_2e (4.0 million tonnes of CO_2e in TP1)

The number of target units which did not achieve their target for TP2 was 1,475 (47%) and covered 4,217 facilities, compared with 1,647 (49%) in TP1. For these target units:

- 155 used some or all of their surplus banked from TP1 to offset under-performance in TP2
- 151 used all of their surplus banked from TP1 and were offered a buy-out fee to make good the remainder of their under-performance in TP2

- 1,169 were offered a buy-out fee to make good the whole of their under-performance in TP2
- the average under-performance was 1.9 thousand tonnes of CO_2e (1 thousand tonnes of CO_2e in TP1)
- the maximum under-performance was 342 thousand tonnes of CO_2e (62 thousand tonnes of CO_2e in TP1)
- the total under-performance was 2.5 million tonnes of CO_2e (2.0 million tonnes of CO_2e in TP1)

If all operators had met their target emissions, they would have reduced emissions by 4.6 million tonnes of CO_2e. They actually reduced their emissions by a further 3.2 million tonnes of CO_2e, so the total reduction is 7.8 million tonnes of CO_2e. This is an increase compared to a total reduction of 5.6 million tonnes of CO_2e in TP1. If all operators had met their target emissions in TP1, they would have reduced emissions by 3.6 million tonnes of CO_2e, however, actual emissions were reduced by a further 2.1 million tonnes of CO_2e.

The operators of target units that missed their targets had the opportunity to use the buy-out mechanism. Of the 1,321 target units that received a buy-out fee notice, the operators of 1,216 target units (92%) covering 4,448 facilities chose to pay the buy-out fee. The total value of all payments received by government by 1 July 2017 was £22.2 million. Following TP1, the operators of 1,420 of 1,627 (86%) target units opted to use the buy-out mechanism and the total value of all payments received by government was slightly lower at £22.1 million.

In total, 7,920 facilities were certified for the third certification period starting on 1 July 2017. In TP1, 7,522 facilities were recertified.

2.2. Overall changes in emissions and energy use

We can calculate changes in emissions and energy use by comparing operators' CO_2e emissions and energy use over the target period against those of the base year. Overall changes are the sum of all the results for individual operators. We can choose to make these calculations with or without adjustment for throughput.

2.2.1. Unadjusted calculation of changes

The simplest way of calculating the changes is to double the energy and emissions data in the base year and subtract the corresponding data reported for the 2-year target period. This is presented in table 1, which shows an overall unadjusted emissions reduction of 4.9 million tonnes of CO_2e. This means that emissions for the 2 years of TP2 were 4.9 million tonnes of CO_2e below what they would have been had they remained at the same level as during the base year. The corresponding energy savings are 23,143 gigawatt hours (GWh).

Table 1: unadjusted changes in emissions (million tonnes of CO_2e)	**TP1**	**TP2**
Base year emissions	26.0	25.2
Base year emissions x 2	52.0	50.4
Target period emissions	45.7	45.5
Emissions reduction	6.2	4.9

Although this approach is easy to calculate, it does not consider changes in throughput that may have occurred compared to the target period. Nor does it consider the fact that any operators that joined the scheme part way through will have less than 2 years' worth of data for the target period.

2.2.2. Adjusted calculation of changes accounting for throughput effects

Relative targets express energy consumption with reference to a measure of activity, for example kilowatt-hours per tonne of product produced. We describe this measure as the specific energy consumption (SEC).

Given that we know the SEC for both the base year and the target period, it is possible to calculate the energy use and emissions that would have occurred in the base year, had there been the same level of throughput as in the target period. Using this adjusted information allows for better assessment of changes in energy efficiency, as it takes into account changes in throughput since the base year and the fact that some operators have not been in the scheme for the full 2 years of TP2. In table 2, this adjustment has been made for all target units with relative targets, but it has not been made for the small number of target units with absolute targets. The results show an overall adjusted emissions reduction of 7.8 million tonnes of CO_2e. The corresponding energy savings are 39,541 GWh.

Table 2: adjusted changes in emissions (million tonnes of CO_2e)	**TP1**	**TP2**
Adjusted base year emissions	51.4	53.3
Target period emissions	45.7	45.5
Emissions reduction	5.6	7.8

2.3. Sector performance

We have provided a summary of each sector’s performance in the data spreadsheet which accompanies this report. It includes energy consumption and CO_2e data for the base year and TP2. We have not reported energy consumption for those sectors with fewer than 3 target units so that we do not show information which is commercially sensitive for individual operators.

The umbrella agreements specify an improvement target for each target period, relative to the base year, expressed as either carbon or energy.

We have determined whether each sector has achieved its target by comparing the actual achievement against a calculated 'sector improvement target'. This target differs to the original sector commitment for the target period because it takes into account the changes in composition of the sector throughout for TP2, such as:

- target units and facilities joining or leaving a sector
- corrections to base year data
- adjustments to target unit targets because of unexpected power supply disruptions, or throughput reductions greater than 10% for target units with absolute target types

The sector improvement targets are predominantly within 1% of the sector commitment.

Based on the sector improvement targets, 40 (82%) of the 49 sectors met their target. The 4 sectors that don't currently contain any target units are not included. This compares to 40 (78%) of the 51 sectors who met their target in TP1.

In contrast to the position for operators holding underlying agreements, there are no direct consequences for sectors over or under-performing against their targets. The purpose of the sector targets is to provide a basis for setting individual targets in the underlying agreements.

2.4. Target unit performance

The operators of all target units in the CCA scheme on 31 December 2016 were required to submit a report of their performance against their targets in the second target period by 1 May 2017.

Operators reported their target unit's energy consumption and throughput data (the quantity of product or output produced) either from the start of TP2 (1 January 2015) or, for new entrants, the date they joined.

The target unit performance table is published in a data spreadsheet.

The table was created under an Open Government Licence. The data is free for you to use without restrictions provided that you acknowledge your source. The table is presented in Open Document Spreadsheet (.ods) format, which you can open and manipulate using standard office software.

We allow secondary reporting to correct errors in reporting such as those that may be found by operators reviewing their data or through audits. We will not republish revised data as a result of secondary reporting.

3. Compliance and non-reporters

We did not receive reports for 31 target units by 1 May 2017. This was 0.97% of the total number of target unit reports expected.

Report submissions made by 8 operators were late and 16 operators voluntarily terminated their agreements by 1 July 2017. The operators of the remaining 7 target units continue to be part of the scheme but their facilities were not certified from 1 July and so these operators are unable to claim the CCL discount.

At the time of publication, we have not issued any financial penalties under the CCA scheme.

4. Further information

See information on GOV.UK for:

- BEIS publications and general information on the CCA scheme provided by us
- CCA sector associations' contact details
- details of facilities with CCL reduced rate certificates
- a glossary of terms included in the Climate Change Agreements Operations Manual
- CCA legislation
- details of the former CCA scheme
- reports for the previous CCA scheme produced for DECC

Would you like to find out more about us or about your environment?

Then call us on
03708 506 506 (Monday to Friday, 8am to 6pm)

email
enquiries@environment-agency.gov.uk

or visit our website
www.gov.uk/environment-agency

incident hotline 0800 807060 (24 hours)
floodline 0345 988 1188 (24 hours)

Find out about call charges (www.gov.uk/call-charges)

Environment first: Are you viewing this on screen? Please consider the environment and only print if absolutely necessary. If you are reading a paper copy, please don't forget to reuse and recycle if possible.

LIT 10683