



Department for
Energy Security
& Net Zero

Climate Change Agreements: Technical Annex

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Introduction

1. This document contains all of the provisions referred to as ‘technical annex’ defined in clause 1.1 of the Umbrella Agreement and Underlying Agreement for the climate change agreement (“CCA”) scheme. It has been structured to reflect the order in which the references are made within the agreements.

Clause 1.1

Clause 1.1

“Novem ratio target” has the meaning set out in the technical annex

The meaning of a Novem ratio target

2. A Novem target is a target calculated using the Novem methodology for target units which produce two or more products whose throughput is measured in different units (for example, litres and m²) or which have significantly different energy intensities of manufacture. The target is stated as a ratio of the target energy consumption to the reference energy. The reference energy is the energy that would have been consumed in the base year for the same level of throughput and product mix as the target period. The Novem method corrects for any distortions created by a changing mix of throughput by generating one common output.

Rule 3.1.2

Rule 3.1.2

An Operator must:

Notify the Administrator within 20 working days of any structural change or other change set out in the technical annex which may give rise to a variation to the target in accordance with Rule 11

Structural changes

3. The following are structural changes which must be notified to the Administrator within 20 working days of the change:

- Changes to the processes carried out at a site, which mean that a process would no longer be an eligible process. Such changes may affect the primary activity carried out in the stationary technical unit such that the change means that a process can no longer be considered an eligible process, or they may affect the relationship between the primary activity and other activities originally determined to be ancillary activities, such that these other activities can no longer be considered ancillary activities.
 - Changes to a facility as a result of an eligible process which used to take place inside the site boundary taking place outside of the site boundary instead.
 - Changes to the proportion of energy which is used in an installation comprising part of a site which would affect the extent of the facility which is eligible to be covered by an agreement as a result of the application of Regulation 3(1) of the Climate Change Agreements (Eligible Facilities) Regulations 2012.
 - A change in the extent of the target facility as a result of parts of the facility ceasing to carry out or starting to carry out Schedule 2 activities.
4. Replacement or replication of plant to increase capacity of the same or similar products is not a structural change unless it entails one of the changes listed in paragraph 5 above.

Other changes

5. An Operator must notify the Administrator within 20 working days of the operator or a facility in the target unit becoming an ailing or insolvent entity, as described in the 'UK Subsidy Control statutory guidance'.

Rule 6.2

Rule 6.2

The Administrator must determine whether the target has been met in accordance with the principles, methodologies and procedures set out in the technical annex.

6. At the end of each target period, the Administrator must assess the performance of the target unit by comparing its actual performance (expressed in the agreed units) with the target energy consumption or emissions derived from the percentage for each target period improvement set out in the underlying agreement against base year.
7. For the purpose of assessing performance of the target unit, only energy consumed or emissions emitted in the target facility will be taken into account.

8. The difference between actual performance and target performance must then be converted into an equivalent CO₂ equivalent (CO₂e) using the equations detailed in paragraphs 52-61.

Calculation of units of energy consumed by a target facility

9. For the purpose of determining whether a target unit has met its target, the units of energy consumed by the target facilities in the target unit must be measured in either kilowatt-hours, Megawatt-hours, Gigajoules or Petajoules and calculated as follows.

Fossil fuels

10. The units of fossil fuels used must be calculated on a gross calorific value basis. No correction must be applied to account for the energy consumed in the extraction, processing and supply of the fossil fuels to a target facility.

General electricity imports

11. Where a target facility consumes electricity other than from a CHP plant or from a dedicated electricity generator (see below) the units of metered electricity consumed must be multiplied by a factor of 2.6.

Combined Heat Power (CHP) (where all fuels are non-renewable)

12. Where the electricity or heat outputs from a CHP plant are consumed within the target facility, the units of energy to report must be calculated on the basis of the units of energy input to the CHP plant, not the units of electricity or heat consumed.
13. Where a target facility is served by a CHP plant (whether the CHP plant is on the associated facility or whether the CHP plant is operated by a 3rd party Operator) and all of the energy from the CHP plant is consumed within the target facility, the target facility must be treated as consuming all of the units of energy input to the CHP and no allocation of those units is required.
14. Where a target facility is served by a CHP plant on the associated facility and some of the electricity or heat outputs from the CHP plant are exported from the facility, or where the target facility imports electricity or heat generated by a CHP plant that is not part of the facility, the energy input to the CHP must be allocated to each consumer of the heat or the electricity as follows:
15. First allocate the energy inputs to the CHP to the electricity and heat outputs using the following formulae:

$$\text{Heat Energy} = \frac{\text{Fuel Input}}{(2 \times \text{Electricity Output}) + \text{Heat Output}} \times \text{Heat Output}$$

$$Electricity\ Energy = \frac{2 \times Fuel\ Input}{(2 \times Electricity\ Output) + Heat\ Output} \times Electricity\ Output$$

Where;

- Heat Energy is the input energy allocated to the heat outputs of the CHP plant.
 - Electricity Energy is the input energy allocated to the electricity outputs of the plant.
 - Fuel Input is the total fuel supplied to the CHP plant, expressed in energy terms, using the Gross Calorific Value of the input fuels. For CHP schemes certified under the Combined Heat and Power Quality Assurance (CHPQA) programme it is the Total Fuel Input (TFI), as defined by the CHPQA Standard.
 - Heat Output is the quantity of heat produced by the CHP plant, expressed in energy terms. For CHP schemes certified under the Combined Heat and Power Quality Assurance (CHPQA) programme it is the Qualifying Heat Output (QHO), as defined by the CHPQA Standard.
 - Electricity Output is the quantity of electricity generated by the CHP plant, expressed in energy terms. For CHP schemes certified under the Combined Heat and Power Quality Assurance (CHPQA) programme it is the Total Power Output (TPO), as defined by the CHPQA Standard.
 - Energy units must be consistent throughout.
16. Where absorption cooling is used to produce a cooling supply, the heat input to the absorption chiller must be metered so far as is reasonably practicable. If the heat input to the absorption chiller is not metered, then the cooling output must be metered and divided by the average coefficient of performance (COP) of the cooling system in order to estimate the heat consumed.
17. Then apportion the energy input to each consumer of heat and electricity as follows:
- Allocate the heat energy to each consumer of the heat in proportion to the quantity of heat from the CHP plant that each consumes.
 - Allocate the electricity energy to each consumer of the electricity in proportion to the quantity of electricity from the CHP plant that each consumes.

If heat is distributed to a number of users (m), this is expressed:

$$Heat\ Output = Heat_1 + Heat_2 + Heat_3 + \dots + Heat_m$$

If electricity is distributed to a number of electricity consumers (n), this is expressed:

$$Electricity\ Output = Electricity_1 + Electricity_2 + Electricity_3 + \dots + Electricity_m$$

The energy inputs to the CHP plant are assigned to consumer, i, according to the formula:

$$\text{Heat Energy}_i = \left(\frac{\text{Heat}_i}{\text{Heat Output}} \right) \times \text{Heat Energy}$$

The electricity energy inputs to the CHP plant are assigned to consumer, j, according to the formula:

$$\text{Electricity Energy}_j = \left(\frac{\text{Electricity}_j}{\text{Electricity Output}} \right) \times \text{Electricity Energy}$$

18. If some of the CHP generated electricity is exported to the public supply (i.e. the grid), and not directly to a known consumer, a credit must be allocated to each heat consumer in respect of all or part of this electricity exported to the grid.
19. The electricity exported to the grid in respect of which a credit must be allocated is the Good Quality CHP electricity (as defined by the CHPQA Standard) exported to the grid. The Good Quality CHP electricity exported to the grid is given by:

$$\begin{aligned} \text{Good Quality CHP Electricity Exported to the Grid} \\ = \text{QPO} - \text{QPO Consumed by Known Customers} \end{aligned}$$

Where;

- QPO is the Qualifying Power Output (as defined by the CHPQA Standard)
 - QPO Consumed by Known Consumers is the CHP electricity on which the climate change levy is not paid
20. The credit allocated to each heat consumer is calculated as follows:
 - Multiply the Good Quality CHP electricity exported to the grid by 2.6
 - Subtract the energy apportioned to the Good Quality CHP electricity exported to the grid (as calculated in paragraph 15). This gives the primary energy that has been saved as a result of the grid exported CHP electricity displacing conventional grid electricity generated at a power station.
 - Divide this saving among each of the consumers of heat from the CHP on a pro-rata basis according to the quantity of heat each uses.
 - Subtract the pro-rata saving from each of the Heat Energy figures (as calculated in paragraph 15), to get a revised Heat Energy figure.
 21. Thus, if QPO were exported to public supply instead of being supplied to consumer 'k', then the revised Heat Energy figures for each consumer 'i' (i = 1,...,m) would be as follows:

$$\begin{aligned}
 \text{Revised Heat Energy}_i & \\
 &= \text{Heat Energy}_i \\
 &\quad - \left((\text{Exported QPO} \times 2.6 - \text{Electricity Energy}_k) \times \frac{\text{Heat}_i}{\text{Heat Output}} \right)
 \end{aligned}$$

22. In cases where there is export of CHP generated electricity to the grid, consumer ‘i’ must report total primary energy consumption, as a result of the use of CHP generated electricity and heat, as Revised Heat Energy_i plus Electricity Energy_i.
23. When calculating credits for grid exported QPO:
- if the fuel allocated to a heat user minus the credit for exported QPO results in an overall fuel figure of less than zero the user affected must set the overall fuel figure to zero;
 - if the heat credit itself for exported QPO to a heat user is negative the user affected must set the credit for exported QPO to zero.

Steam

24. Imported or exported steam must be accounted for by taking the enthalpy of the steam and dividing by the efficiency of the system that generates the steam and distributes it to the user's target facility boundary; in order to account for the total primary energy consumed (i.e. fuel combusted) to produce the steam that is consumed.
25. Account must be taken of steam pressure - for example, where sites import high-pressure steam and return it at a lower pressure.

Renewable energy and energy from waste

26. The energy content of all renewable and waste fuels combusted for the generation of heat, which is subsequently consumed within the target facility, must be determined and reported. If the heat generating plant is within the target facility and some of the generated heat is exported, then the energy content of fuel associated with this exported heat is calculated on a pro-rata basis and does not need to be reported.
27. Where a qualifying renewable fuel is combusted, the heat will be zero rated for carbon. Qualifying renewable fuels are listed below (see qualifying renewable rates at [Annex A](#)).
28. When a non-renewable waste is combusted, the heat will not be zero rated for carbon.
29. Where the fuel combusted is not 100% renewable, i.e. it is a mixture of a renewable fuel(s) and conventional fossil fuels and/or non-renewable waste, then combustion of this fuel mix must be reported as mixed fuel combustion. In this situation, the carbon factor calculated must be based on individual carbon factors for the constituent fuels, weighted by energy content. The proportion of the mixed fuel that is a qualifying renewable fuel will have a zero carbon factor attached to it.

CHP (where all the fuel input is renewable)

30. If the fuel input to the CHP is 100% renewable all of the electricity and heat outputs of the CHP must be considered renewable. This means that consumption of all of this electricity will be treated as if it were grid electricity. Consumption of CHP heat will lead to the reporting of primary energy consumption (in the form of some of the input fuels), but this energy consumption will be zero rated for carbon.
31. For a CHP where the fuel inputs are 100% renewable, the primary energy for CHP heat is calculated as follows:
32. Primary energy for CHP heat = Total Fuel Input to CHP – (Total Power Output from CHP*2.6)
33. If, Total Fuel Input to CHP < (Total Power Output from CHP *2.6), then primary energy for CHP heat must be set to zero.
34. This means that the energy input to renewable CHP must be recorded in order that the primary energy for renewable CHP heat can be determined and reported.

CHP (where the fuel input is a mix of renewable and non-renewable)

35. If the fuel input to the CHP is not 100% renewable, then a proportion of the electricity output must be treated as renewable and the balance as non-renewable. The proportion of the electricity output that is treated as renewable must be the same as the proportion of the fuel input that is deemed renewable, on an energy content basis.
36. If the fuel input to the CHP is not 100% renewable, then a proportion of the heat output must be considered renewable and the balance as non-renewable. The proportion of the heat output that is treated as renewable must be the same as the proportion of the fuel input that is treated as renewable, on an energy content basis.
37. The primary energy associated with electricity and heat outputs of the CHP treated as renewable must be determined as set out in the section above (CHP where all of the fuel input is renewable).
38. The primary energy associated with the electricity and heat outputs of the CHP treated as non-renewable must be determined as set out in the section above (Combined Heat and Power where all of the fuel inputs are non-renewable).

Qualifying renewable fuels

39. The table at Annex A sets out which are the qualifying renewable fuels.

Fuel used as a chemical feedstock

40. Fuels used as a chemical feedstock and embodied in a chemical product must not be counted as part of a target facility's energy use. However, fuels which are used as a reductant must be counted.

Electrolysis

41. All energy consumed for electrolysis must be counted as part of a target facility's energy use.

Energy from exothermic reactions

42. Energy from exothermic reactions not involving fossil fuels must not be counted as part of a target facility's energy use.

Electricity from heat recovery

43. Where electricity is generated from the recovery of waste heat and this electricity is consumed within the target facility, this consumption must not be counted as part of the target facility's energy consumption.

Calculation of carbon emissions from a target facility

44. The total number of units of carbon emitted from a target facility during a target period must be calculated by multiplying the units of energy consumed of each fuel used in the target facility during the relevant target period, by the relevant carbon emission factor set out below for that fuel.

Carbon emissions = Fuel * Carbon Emission Factor (kgC/kWh)

Table 1 - Primary Energy*

Grid and Renewable Electricity = 0.0546	Coal = 0.0794	Coke = 0.1170
Gas Oil = 0.0758	Heavy Fuel Oil = 0.0732	Petrol = 0.0643
LPG = 0.0585	Kerosene = 0.0673	Ethane = 0.0545
Naphtha = 0.0646	Refinery Gas = 0.0671	Petroleum Coke = 0.0908
Natural Gas = 0.0505		

* All factors are expressed in kgCe/kWh¹

¹ With the exception of coke and ethane, the figures in table 1 are taken from table 1c of annex 1 of 2012 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting. In the case of coke and ethane, the figures are carried over from fuel conversion factors in CCA10 for the old CCA scheme (2002-2010). The figure for electricity is the 5 year rolling average for 2010 in table 3c of annex 3 of 2012 Guidelines to Defra/DECC's GHG Conversion Factors for company reporting. The figure of 0.0546 kgC/kWh of electricity is in primary energy terms and 2.6 units of primary energy are assumed to be associated with each unit of consumed electricity.

Process carbon emissions

45. Carbon emissions from industrial processes must not be counted as part of a target facility's carbon emissions unless they result from combustion or oxidation of fossil fuels. Process emissions do not include emissions from the combustion of fuel where heat is not recovered and consumed by the target facility, as is the case with flaring.
46. Carbon emissions from electrodes must not be counted as part of a target facility's carbon emissions.

Calculation of throughput from a target facility

47. The calculation of a target facility's throughput for each target period must be agreed with the Administrator and set out in the Underlying Agreement for the target unit.

Rule 6.3

Rule 6.3

An Operator must notify the Administrator on or before 31st January in the year following the end of a target period of any circumstances which may give rise to an adjustment to the target for the previous target period, as set out in the technical annex.

Circumstances which may give rise to target adjustments for the previous target periods

48. An Operator must notify the Administrator on or before 31st January in the year following the end of a target period if the following circumstances have occurred:
 - In respect of a target unit which has an absolute target if the throughput in the target period was less than 90% of 2 times the throughput in the base year.
 - If there has been an unexpected disruption in the supply of energy to the target facility or an unexpected failure in on-site electricity generation plant serving the target facility, which causes the target unit to fail to meet its target.
49. In order to determine that there has been an unexpected disruption in the supply of energy to the target facility or an unexpected failure in on-site dedicated electricity generation, data and other evidence will need to be provided to the Administrator demonstrating the following:
 - That the supply disruption actually took place and the duration of the disruption.
 - That the supply disruption was unexpected and that the nature of energy supply contracts is such that the disruption could not have been anticipated. In the case of failure of electricity generation plant serving the target facility, it will be

necessary to prove that supplier recommended maintenance procedures and schedules had been followed and that the total period of down time was over and above what would be required for routine maintenance over the target period.

Rule 6.4

Rule 6.4

If an Operator makes a notification under Rule 6.3, the Administrator may adjust the previous target in accordance with the principles, methodologies and calculations set out in the technical annex and must serve a notice on the Operator

Adjusting a target unit target in accordance with Rule 6.4

50. When an Operator has made a notification that throughput has decreased during a Target Period by more than 10% of the throughput in the base year, the Administrator may adjust the previous target using either method 1 or method 2 below.

Method 1

- Method 1 must be used by the Administrator if the actual target period throughput is less than 90% of the throughput in the base year and if no additional information is provided. Except as provided below, the target must be adjusted directly in proportion to the reduction in throughput (i.e. by the percentage by which the actual target period throughput is lower than the base year throughput).
- Method 1 provides for a taper to be applied in cases where the actual throughput at the target period is between 10% and 20% less than the base year throughput. The taper adds back some energy (or carbon) to the absolute target in such situations so that there is not a sudden and precipitous decrease in the value of the absolute target as soon as the actual target period throughput is >10% less than the base year throughput. The full value of the taper is added back to the target if the actual target period throughput is exactly 10% less than the base year throughput and no taper is added back to the target if the actual target period throughput is 20% or more less than the base year throughput. The full value of the taper is 10% of the absolute energy target. The value of the taper added back to the absolute target varies linearly between actual target period throughput being 10% and 20% less than the base year throughput.

Method 2

- Method 2 must be used by the Administrator where an Operator has provided a statistically valid energy – throughput relationship. To demonstrate a statistically valid energy – throughput relationship, an Operator must show that there is a correlation factor with an r-squared value of greater than [0.8] between energy

consumed in the target facility and throughput. If the R-squared value is less than [0.8], Method 2 must not be used and the Administrator must use the default Method 1 calculation to revise the target. The target adjustment takes account of base load energy use and is achieved by reducing the target by a percentage. This percentage is the extent to which the energy target, for the agreed level of throughput, is less than the energy that would have been consumed in the reference year for that same level of throughput. To determine the latter, the Operator must establish an energy/throughput curve for the reference year.

51. When an Operator has made a notification that there has been an unexpected disruption in the supply of energy to the site or an unexpected failure in on-site dedicated electricity generation the Administrator may adjust the target to take account of the difference between the quantity and type of primary energy consumption that would normally have been required to support operations for the period of the supply failure and the quantity and type of primary energy consumption that was actually required to support operations during the period of the failure. The difference between the two will be taken as the additional energy (or carbon) incurred by the target facility as a result of the unexpected supply disruption.

Rule 7.8

Rule 7.8

For the purposes of calculating the buy-out fee under this Rule and for calculating the amount of any surplus, the Administrator must calculate the difference between the target for the target period and the actual performance achieved during the target period, where the target and the actual performance achieved are expressed in the same units, and convert any difference between the two into a quantity of carbon dioxide, expressed in units of tCO₂e, using the principles, methodologies and calculations set out in the technical annex.

Calculating a buy-out and surplus associated with target unit performance against target

Energy targets

52. For target units with targets expressed in energy terms, any under-performance or over-performance against target must be translated into an equivalent energy (e.g. kWh) as follows:
53. For absolute energy targets:

Equivalent Energy

$$= \text{Target Energy Consumption for Target Period} \\ - \text{Actual Energy Consumption for Target Period}$$

54. For relative energy targets (including Novem targets):

Equivalent Energy

$$= (\text{Target Relative Energy Performance} \\ - \text{Actual Relative Energy Performance}) \\ \times \text{Actual Throughput at Target Period}$$

55. In the cases above, a positive value of equivalent energy indicates an over-performance against target and a negative equivalent energy represents an under-performance against target. The equivalent energy must be translated into an equivalent carbon equivalent (Ce) by multiplying the equivalent energy by the target unit's average Carbon equivalent emissions per unit energy (e.g. kgCe/kWh) for the target period under consideration. The equivalent Ce must then be converted into an equivalent CO₂e by multiplying the equivalent Ce by the factor 44/12.

Carbon targets

56. For target units with targets expressed in carbon equivalent (Ce), any shortfall of performance against the target must be translated into an equivalent Ce which will be converted into an equivalent CO₂e by multiplying the equivalent carbon by the factor 44/12.

57. For absolute carbon targets:

Equivalent Ce

$$= \text{Target Carbon Emissions for Target Period} \\ - \text{Actual Carbon Emissions at Target Period}$$

$$\text{Equivalent CO}_2\text{e} = \text{Equivalent Carbon} \times (44 / 12)$$

58. For relative carbon targets (including Novem targets²):

Equivalent Ce

$$= (\text{Target Relative Carbon Performance} \\ - \text{Actual Relative Carbon Performance}) \\ \times \text{Actual Throughput at Target Period}$$

$$\text{Equivalent CO}_2\text{e} = \text{Equivalent Carbon} \times (44 / 12)$$

² In the case of a target unit with a Novem target, the throughput is the actual reference carbon for the target period in question.

For both carbon and energy targets (above)

59. Where the equivalent CO₂e is positive, the target unit has met its target and the equivalent CO₂e constitutes surplus.
60. Where the equivalent CO₂e is negative, the target unit will have failed to meet its target.
61. For Target Periods 1 to 4 and for the purpose of calculating the buy-out fee, if original banked surplus CO₂e > equivalent CO₂e, then the buy-out fee due is zero for the target period in question and the new banked surplus is reduced to: original banked surplus CO₂e (tonnes) – equivalent CO₂e (tonnes). For Target Period 5 and Target Period 6, no banked surplus may be used.

Rule 9

Rule 9

Variation by inclusion of additional facilities

Covering rules 9.2.3, 9.3.3 and 9.4.3

Inclusion and exclusion of facilities

62. A facility is only eligible to be considered for inclusion in an existing underlying agreement where it has the same operator as the operator of the underlying agreement under which it will be included.
63. The operator for this purpose is the legal person who has control over the operation of a facility. In respect of a facility in which different parts of the facility are operated by different persons on the same site, those persons may nominate one person to be the nominated operator of the facility. The following factors help decide whether a legal person has sufficient control to be considered the operator of a facility, or part of a facility.

Does the proposed operator have the authority and ability to:

- Manage site operations through having day-to-day control of plant operations, including the manner and rate of operation
- Ensure that permit conditions are effectively complied with
- Decide who holds key staff positions and have incompetent staff removed
- Make investment and/or other financial decisions affecting the performance of the facility

- Ensure that regulated activities are suitably controlled in an emergency.

Rule 9.6

Rule 9.6

The Administrator may vary the target of a target unit to take account of the inclusion of additional facilities following the principles, methodologies and calculations set out in the technical annex.

Varying a target unit target following inclusion of a facility

64. If a facility is added to a target unit, the Administrator may vary the target to take account of the addition of the facility, as follows.
65. If the additional facility is to be added to a target unit with an absolute target a new target must be calculated by adding the target energy or carbon for the additional facility to the target energy or carbon value for the existing target unit.
66. If the additional facility is to be added to a target unit with a relative target, the Administrator may vary the target to take account of the addition of the facility using the following calculation:

$$\text{New TU Target} = \frac{(\text{Old TU Target} \times \text{Old TU BY T/P}) + (\text{AF Target} \times \text{AF BY T/P})}{\text{Old TU BY T/P} + \text{AF BY T/P}}$$

Where;

- New TU target = new target for the combined target unit
 - Old TU target = target unit target before adding the facility
 - Old TU BY T/P = target unit base year throughput before adding the facility
 - AF target = target for the additional facility on its own
 - AF BY T/P = base year throughput for the additional facility
 - All the targets here are in relative terms (for example, kWh/tonne)
67. If the additional facility is to be added to a target unit with a relative Novem target, the Administrator may vary the target to take account of the addition of the facility using the following calculation:

$$\text{New TU Target} = \frac{(\text{Old TU Target} \times \text{Old TU BY Energy}) + (\text{AF Target} \times \text{AF BY Energy})}{\text{Old TU BY Energy} + \text{AF BY Energy}}$$

Where;

- New TU target = new target for the combined target unit
- Old TU target = target unit target before adding the facility
- Old TU BY energy = target unit base year energy (or carbon) before adding the facility
- AF target = target for the additional facility on its own
- AF BY energy = base year throughput for the additional facility
- All the targets here are in Novem (ratio) terms (i.e. a value between 0 and 1)

68. In each case, once the revised target has been determined, the Administrator must apply a stringency test to assess whether the performance that the proposed target unit would have had at the most recently completed target period is better than the target calculated for the proposed target unit for the following target period. A stringency test should not be applied to Target Period 6 in respect of changes during Target Periods 1 to 4. The stringency test process will still apply in response to a data correction to Target Periods 1 to 4 data and a relevant variation. Target Period 6 targets should not be adjusted as a result of a stringency test applied to variation to agreements for changes to the agreement in Target Periods 1 to 4.

69. Where this is found to be the case, all subsequent targets must be adjusted by multiplying them by the ratio of the performance of the proposed target unit at the most recently completed target period to the mathematically equivalent target for the proposed target unit at the most recently completed target period:

$$\text{Adjustment ratio} = \frac{\text{Performance of proposed target unit at most recently completed target period}}{\text{Mathematically equivalent target for most recently completed target period}}$$

Rule 10.2

Rule 10.2

If:

- a Sector Association or an Operator has notified the Administrator that it wishes to exclude a facility under Rule 10.1; or
- the Administrator has terminated an agreement so far as it relates to an individual facility under Regulation 17(4),

the Administrator may vary the target to take account of the exclusion or termination, and may request such information from the Sector Association or the Operator as it requires in order to determine the revised target.

Varying a target unit target following the removal of a facility

70. When excluding a facility, if the exclusion of the site is due to it closing and is not part of a change of ownership, then this will be treated as an act of rationalisation and the original target will be retained. If there is a site closure for any other reason, the Administrator may vary the target, using the same principles as set out for the addition of a facility under Rule 9.6 (including the application of the stringency test).

Rule 11.1

Rule 11.1

The Administrator may vary the target to take account of:

- 1) any structural changes or other changes to the target unit which the Operator must notify to the Administrator under Rule 3.1.2;
- 2) any errors in the data provided to the Administrator for the base year; or
- 3) in respect of a target unit which has a Novem ratio target, the removal of a product produced in the target period which was produced in the base year

following the principles, methodologies and calculations set out in the technical annex.

Varying a target unit for any structural change or other change, an error in the base year data or, in respect of a target unit with a Novem target, the removal of a product

71. The Administrator may vary the target to take account of the circumstances in Rule 11.1.1, 11.1.2 and 11.1.3 by making an appropriate and proportionate adjustment to the base year data from which the target was derived, to take account of such circumstances, and recalculating the target on the basis of the revised base year data.

Annex A – Qualifying Renewable Fuels

Biomass (plants and parts of plants)

- Straw
- Hay and grass
- Crops (e.g. Maize)

Biomass wastes

- Waste wood.
- Forestry residues.
- Landfill gas.
- Sewage sludge.
- Biogas produced by digestion, fermentation or gasification of biomass.
- Animal and fish oils, fats and tallow.

Biomass fraction of mixed materials

- Biomass fraction of textile wastes.
- Biomass fraction of composites containing wood
- Biomass fraction of municipal and industrial wastes

Fuels whose components and intermediate products have all been produced from biomass

- Bioethanol.
- Biodiesel.
- Biomethanol.
- Biogas.
- Syngas via gasification or pyrolysis
- Liquid fuels via pyrolysis

Annex B – Interpretation

Terms defined in the Agreements shall have the same meaning in this Technical annex. Terms not defined in the Agreements shall have the meaning set out below.

Absolute target	An absolute target is set for a target period at an assumed level of throughput for that target period. An absolute target can be expressed as either an energy target or as a carbon target. The assumed level of throughput for that target period is twice the actual level of throughput in the base year.
Ancillary activities	Activities that: a) are directly associated with any of the primary activities carried out at an installation; b) have a technical connection with those primary activities; and c) could have an effect on pollution.
Carbon target	A target expressed in tonnes of carbon dioxide
CHPQA Standard	The formal document setting out the methodology, definitions, thresholds, and criteria for 'Good Quality' certification for the operation of the Combined Heat and Power Quality Assurance programme (CHPQA). CHPQA is a government initiative that assesses the quality of CHP in the UK, to ensure that entitlements to fiscal and other benefits are commensurate with, and incentivise, the energy efficient performance of CHP schemes. Reference should be made to the most recent CHPQA Standard.
Eligible processes	The term used to describe: a) Part A activities; b) the processes listed in the Schedule of The Climate Change Agreements (Eligible Facilities) Regulations 2012; and c) ancillary activities.
Energy target	A target expressed in relative or absolute that includes units of energy, such as kWh, MWh and PJ).
EPR	The Environmental Permitting (England and Wales) Regulations 2016.
Fuel	Gas, liquid or solid matter that can be consumed to produce energy in the form of heat or power.

Installation	The installation stationary technical unit (STU) and directly associated activities (DAA) combined.
Part A Activity	An activity falling within Part A(1) of any Section in Part 2, or Part A(2) of any Section of Part 2 of Schedule 1 to the EPR, taking account of any relevant numeric thresholds, relevant exceptions or relevant modifications in paragraph 51 of Schedule 6 to the Finance Act 2000.
Primary activity	An activity the carrying out of which at a facility results in the facility being eligible to be covered by an agreement.
Primary energy	The primary fuel (or other primary energy source such as wind or solar energy) consumed in the process of generating and delivering to the point of consumption secondary forms of energy such as electricity, heat or mechanical power.
Reference energy	<p>Relating to target units with relative targets, reference energy is the energy that a target unit would have consumed if it produced at the same level realised during the target period but at the levels of efficiency recorded for the base year.</p> <p>For a relative target expressed in terms of specific energy consumption (SEC), reference energy = base year SEC × target period throughput.</p> <p>For a relative target expressed in Novem terms, reference energy = base year SEC × target period throughput summed across all separate products.</p>
Relative target	A target expressed in terms of the amount of energy consumed per unit of activity, usually throughput (for example, kWh per tonne or MWh per m ²).
Schedule 2 activities	Activities listed in Schedule 2 to The Greenhouse Gas Emissions Trading Scheme Order 2020 establishing a UK-wide greenhouse gas emissions trading scheme (ETS).
Site	A site is an area of land falling within a continuous boundary which encloses the land used in connection with the operation of the installation. For this purpose, however, an area of land may still be regarded as a single site even if it is dissected by a road, railway line or river. Other non-contiguous parcels of land would not, however, constitute a single site.
Specific energy consumption (SEC)	The amount of energy consumed per unit of activity.
Stationary technical unit (STU)	A place where one or more eligible process is carried out.

Target facility The part or parts of a facility which do not carry out Schedule 2 activities. The target facility is the part of a facility in respect of which targets are set and energy use and emissions must be reported.

Annex C – Summary of Updates to Technical Annex

Date	Updates
18 December 2020	Updated Technical Annex published to incorporate changes required for added Target Period 5
18 January 2021	<p>Rule 3.1.2 – Text revision to EU references following the end of the transition period for the UK exiting the EU.</p> <p>Rule 6.3 – Text revision to include the impacts of COVID-19 on Target Period 4 performance to the list of circumstances which may give rise to adjustments for Target Period 4 targets.</p> <p>Rule 6.4 – Text revision to set out how a target unit target may be adjusted to take account of the impacts of COVID-19 on Target Period 4 performance.</p> <p>Annex B – Text revision to add the definition for ‘<i>Annex 1 activities</i>’ following the end of the transition period for the UK exiting the EU.</p>
December 2023	<p>Updated Technical Annex published to incorporate changes required for added Target Period 6. Additionally:</p> <p>Rule 3.1.2- Text revision to EU references following the end of the transition period for the UK exiting the EU.</p> <p>Rule 6.3 Text revision to remove reference to COVID-19 impacts.</p> <p>Rule 6.4 Text revision to remove reference to COVID-19 impacts.</p> <p>Annex B- Removal of reference to Annex 1 activities and addition of Schedule 2 activities.</p>

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