UK Government

Climate Change Agreements: Technical Annex

Department for Energy Security and Net Zero (February 2026)

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Contents

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 agreements ("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

"CHP" means combined heat and power plant as more particularly described in the Technical Annex;

2. Combined Heat and Power (CHP) is an integrated energy generation process in which power (mainly electricity) is produced and the heat that would otherwise be wasted in its generation is recovered and used for a beneficial purpose, delivering a higher overall fuel efficiency than the separate production of heat and power.

3. Further information regarding reporting and how to account for energy consumed within a CHP can be found in paragraphs 7-8 and 17-43.

Rule 3.1.2

Rule 3.1.2

An Operator must:

Notify the Administrator within 20 Working Days of becoming aware of any structural change or other change (as more particularly described in the Technical Annex) which may give rise to a variation to the Target in accordance with Rule 10.

Structural changes

4. 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 impacting the 70% Rule: 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, as amended from time to time.
- 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.

5. 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 4 above.

Other changes

6. An Operator must notify the Administrator within 20 working days of the operator or the facility becoming an ailing or insolvent entity, as described in the 'UK Subsidy Control statutory guidance'[1].

Rule 3.1.12

Rule 3.1.12

An Operator must:

Use the Special Reporting Methodology to determine the Base Year and Target Period performance for each Facility using a CHP that satisfied the criteria set out in the Technical Annex.

7. All CHP schemes will be required to use the special reporting methodology (SRM) for CHP where the following criteria are met:

    - all the facility's direct fuel consumption is covered by the UK Emissions Trading Scheme (UK ETS)

[1] UK subsidy control regime: statutory guidance - GOV.UK

- the facility consumes electricity generated in a CHP plant and this CHP plant is covered by the UK ETS
    - the facility can import electricity from the grid

8. Where all three criteria are met, the SRM must be used to determine the performance of the facility in the base year and at subsequent target periods.

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.

9. At the end of each target period, the Administrator must assess the performance of the facility 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 the base year.

10. For the purpose of assessing performance of the facility, only energy consumed or emissions emitted in the target facility will be taken into account.

11. The difference between actual performance and target performance must then be converted into carbon dioxide equivalent (CO2e) using the equations detailed in paragraphs 57-70.

Calculation of units of energy consumed by a target facility

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

Fossil fuels

13. 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

14. The units of metered electricity consumed from the grid and generated from the combustion of renewable fuel must be multiplied by a factor of 2.1.

Self-generated renewables (Photovoltaic, wind or hydro)

15. Where a target facility uses electricity self-generated from an on-site renewable source the metered units consumed must be multiplied by a factor of 1.0.

16. Self-generated electricity from an on-site renewable source means electricity which is generated from

    - Direct conversion of sunlight
    - Wind, or
    - Water power

And is;

    - Generated in plant which is in, and is intended for supplying electricity for use by a facility, or
    - Supplied to a facility without passing through a distribution system operated by an electricity utility

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

17. Where the electricity or heat outputs from a CHP plant are consumed within the target facility, and the CHP is not covered by UK ETS, 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. Facilities meeting the criteria for the special reporting methodology (SRM) must follow the SRM procedures outlined in paragraphs 7-8.

18. 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.

19. 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:

20. First allocate the energy inputs to the CHP to the electricity and heat outputs using the following formulae:

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

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

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.

21. 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.

22. 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:

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

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

$$Electricity\ Output = Electricity_1 + Electricity_2 + Electricity_3 + \cdots Electricity_n$$

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

$$Heat\ Energy_i = \left(\frac{Heat_i}{Heat\ Output}\right) \times Heat\ Energy$$

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

$$Electricity\ Energy_j = \left(\frac{Electricity_j}{Electricity\ Output}\right) \times Electricity\ Energy$$

23. 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.

24. 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:

$$Good\ Quality\ CHP\ Electricity\ Exported\ to\ the\ Grid = QPO - QPO\ Consumed\ by\ Known\ Customers$$

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

25. The credit allocated to each heat consumer is calculated as follows:

- Multiply the Good Quality CHP electricity exported to the grid by 2.1
- Subtract the energy apportioned to the Good Quality CHP electricity exported to the grid (as calculated in paragraph 20). 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 20), to get a revised Heat Energy figure.

26. 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:

$$Revised\ Heat\ Energy_i = Heat\ Energy_i - \left((Exported\ QPO\ \times 2.1 - Electricity\ Energy_k) \times \frac{Heat_i}{Heat\ Output} \right)$$

27. 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).

28. 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

29. 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.

30. 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

31. 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.

32. 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).

33. When a non-renewable waste is combusted, the heat will not be zero rated for carbon.

34. 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)

35. 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 using a Primary Electricity Factor of 2.1. 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.

36. For a CHP where the fuel inputs are 100% renewable, the primary energy for CHP heat is calculated as follows:

37. Primary energy for CHP heat = Total Fuel Input to CHP – (Total Power Output from CHP*2.1)

38. If, Total Fuel Input to CHP < (Total Power Output from CHP *2.1), then primary energy for CHP heat must be set to zero.

39. 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)

40. 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.

41. 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.

42. 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).

43. 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

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

Fuel used as a chemical feedstock

45. 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

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

Energy from exothermic reactions

47. 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

48. 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 dioxide equivalent emissions from a target facility

49. 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 [kgCO2e] = Fuel [kWh] * Carbon Emission Factor (kgCO2e)/kWh)

Table 1 - Primary Energy*

Grid Electricity = 0.10046	Coal = 0.32463	Coke = 0.42900
On-site Renewable Electricity[2] = 0.00000	Gas Oil = 0.25679	Heavy Fuel Oil = 0.26816
Petrol = 0.22719	LPG = 0.21449	Kerosene = 0.24677
Ethane = 0.19983	Naphtha = 0.23651	Refinery Gas = 0.18324
Petroleum Coke = 0.34095	Natural Gas = 0.18254	Liquid Nitrogen = 0.10046
Dry ice (CO2) = 0.10046		

* All factors are expressed in kgCO2e/kWh.

Process carbon emissions

50. 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.

51. Carbon emissions from electrodes must not be counted as part of a target facility's carbon emissions.

Calculation of throughput from a target facility

52. The calculation of a target facility's throughput for each target period must be agreed with the Administrator and recorded in the MyCCA Register.

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

53. 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 facility which has allocated 100% of base year energy to fixed energy, if the throughput in the target period was less than 90% of the throughput in the base year for TP7 and if the throughput in the target period was less than 90% of 2 times the throughput in the base year for TP8 and TP9.

- 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 facility to fail to meet its target.

54. 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 contract 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 Decision Notice on the Operator, setting out:

whether or not it had decided to vary the Target; and

any revised Target (as varied) for the Facility.

Adjusting a facility target in accordance with Rule 6.4

55. 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, or by more than 10% of two times the throughput in the base year for a two-year target period, 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 throughout 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 throughout.

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.

56. 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 tCO2 Equivalent, using the principles, methodologies and calculations set out in the Technical Annex.

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

Energy targets

57. For facilities 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:

58. For adapted Novem targets:

$$Target\ Energy = Target\ Fixed\ Energy + Target\ Variable\ Energy$$

Where:

For Target Period 7

$$Target\ Fixed\ Energy = Base\ Year\ Fixed\ Energy\ \times (1 - Target\ Period\ Target\ \%)$$

For Target Periods 8 and 9

$$Target\ Fixed\ Energy = 2 \times Base\ Year\ Fixed\ Energy\ \times (1 - Target\ Period\ Target\ \%)$$

For Target periods 7, 8 and 9

Where:

SEC = Specific Energy Consumption

$$Target\ Variable\ Energy$$
$$= \sum [(Product\ N\ Variable\ Energy\ Base\ Year\ SEC)$$
$$\times (1 - Target\ Period\ Target\ \%) \times (Product\ N\ Target\ Period\ Production)]$$

59. Target Variable Energy is calculated by taking the Base Year Specific Energy Consumption (SEC) for each product, applying the required Target Period percentage reduction to reflect the improvement target, and multiplying the result by the facility's actual production of that product during the Target Period. The values for all products are then summed to give the facility's Target Variable Energy.

For example:

A facility produces two products during the Target Period.

In the Base Year, Product A had a Variable SEC of 10 MWh per tonne and Product B had a Variable SEC of 5 MWh per tonne. The Target Period improvement target is 10%. During the Target Period, the facility produced 100 tonnes of Product A and 200 tonnes of Product B.

Applying the 10% improvement gives adjusted SECs of 9 MWh per tonne for Product A and 4.5 MWh per tonne for Product B.

Multiplying by Target Period production gives 900 MWh for Product A (9 × 100) and 900 MWh for Product B (4.5 × 200).

Summing across both products gives a Target Variable Energy of 1,800 MWh.

60. To determine whether a facility has over- or under- performed against its target the facility's actual energy consumption for the relevant Target Period must first be established. Actual energy consumption must be measured in accordance with the rules set out in paragraphs 9–11 (e.g. use of gross calorific values for fuels; application of the 2.1 factor for metered electricity imports, where applicable). Once Actual Energy Consumption for the Target Period has been calculated, performance is assessed by comparing this value with the facility's **Target Energy** (as defined above). The difference between these two quantities is the **Equivalent Energy**:

$$Equivalent\ Energy = Actual\ Energy\ Consumption\ (TP) - Target\ Emery\ (TP)$$

61. 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 facility's average Carbon equivalent emissions per unit energy (e.g. kgCe/kWh) for the target period under consideration

Carbon targets

62. For facilities 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.

63. For unified Novem targets:

$$Target\ Carbon = Target\ Fixed\ Carbon + Target\ Variable\ Carbon$$

Where:

For Target Period 7:

$$Target\ Fixed\ Carbon = Base\ Year\ Fixed\ Carbon\ \times (1 - Target\ Period\ Target\ \%)$$

For Target Periods 8 and 9:

$$Target\ Fixed\ Carbon = 2 \times Base\ Year\ Fixed\ Carbon\ \times (1 - Target\ Period\ Target\ \%)$$

For Target Periods 7, 8 and 9:

Where:

SCC = Specific Carbon Consumption

$$Target\ Variable\ Carbon = \sum [(Product\ N\ Variable\ Carbon\ Base\ Year\ SCC) \times (1 - Target\ Period\ Target\ \%) \times (Product\ N\ Target\ Period\ Production)]$$

64. Target Variable Carbon is calculated by taking the Base Year Specific Carbon Consumption (SCC) for each product, applying the required Target Period percentage reduction to reflect the improvement target, and multiplying the result by the facility's actual production of that product during the Target Period. The values for all products are then summed to give the facility's Target Variable Carbon.

For example:

A facility produces two products during the Target Period and has a unified Novem carbon target.

In the Base Year, Product A had a Variable SCC of 0.20 tCe per tonne and Product B had a Variable SCC of 0.10 tCe per tonne. The Target Period improvement target is 10%. During the Target Period, the facility produced 100 tonnes of Product A and 200 tonnes of Product B.

Applying the 10% improvement gives adjusted SCCs of 0.18 tCe per tonne for Product A and 0.09 tCe per tonne for Product B.

Multiplying by Target Period production gives 18 tCe for Product A (0.18 × 100) and 18 tCe for Product B (0.09 × 200).

Summing across both products gives a Target Variable Carbon of 36 tCe.

65. To determine whether a facility has over or underperformed against a carbon target, the facility's Actual Carbon Emissions for the relevant Target Period must first be established. Actual carbon must be calculated by multiplying the units of each fuel consumed during the Target Period by the applicable carbon emission factors set out earlier in this Annex. Once Actual Carbon Emissions have been calculated, performance is assessed by comparing

this value with the facility's Target Carbon (as defined above). The difference between these two quantities is the Equivalent Carbon:

$$Equivalent\ Carbon = Actual\ Carbon\ (TP) - Target\ Carbon\ (TP)$$

66. A positive value of equivalent carbon indicates an over-performance against target and a negative equivalent carbon represents an under-performance against target. This will be converted into an equivalent CO2e by multiplying the equivalent carbon by the factor 44/12.

For both carbon and energy targets (above)

67. Where the equivalent CO2e is positive, the facility has met its target and the equivalent CO2e constitutes surplus, which may be carried forward to the next target period within the new scheme on a facility basis. Surplus from Target Period 6 or earlier cannot be carried forward into the new scheme.

68. Where the equivalent tCO2e is negative, the facility will have failed to meet its target, and the buy-out fee must be calculated as:

$$\text{Buy-out fee} = P \times (W - S)$$

Where:

- P is the buy-out price, set in advance of each target period based on a weighted average of the CCL gas and electricity rates (see paragraph 69 below for the formula which sets the buy-out price for TP7-TP9), as communicated by the Administrator.
- W (in tCO2e) is the amount by which emissions exceed the target (i.e., the absolute value of the negative equivalent tCO2e).
- S is the surplus carried forward from the previous target period within the new scheme, or zero if no surplus is available.

69. As outlined in regulation 12 of The Administration Regulations, below is the confirmed formula which sets out the buy-out price (P) for TP7-TP9:

$$Buyout\ price\ (P) = \left[\left(\frac{A * B}{C\ * D\ * E}\right) * 1000\right] + \left[\left(\frac{F * G}{H\ * E}\right)) * 1000\right] * \frac{1}{2}$$

Where:

- A = CCL main rate for electricity (£ per kWh)
- B = CCL reduced rate for electricity
- C = 0.0274 kg CO2e/kWh
  - Kilogram of carbon equivalent per kilowatt hour of primary grid electricity consumed
- D = 2.1
  - The conversion factor for calculating the primary energy for use of grid electricity
- E = 44/12
  - The relative molecular mass of carbon dioxide to carbon
- F = CCL main rate for natural gas (£ per kWh)
- G = CCL reduced rate for natural gas
- H = 0.0498 kg CO3e/kWh

- Kilogram of carbon equivalent per kilowatt hour of natural gas consumed

The main and reduced CCL rates in A, B, F, G are those in place on 1st April of the first year of the relevant Target Period. For example, the buy-out price for TP7 is as follows:

$$TP7\ Buyout\ price = \left[\left(\frac{0.00801 * 92\%}{0.0274\ * 2.1\ * \left(\frac{44}{12}\right)}\right) * 1000\right] + \left[\left(\frac{0.00801 * 89\%}{0.0498\ * \left(\frac{44}{12}\right)}\right) * 1000\right] * \frac{1}{2}$$

$$TP7\ Buyout\ price = £37/tCO2e$$

Note, as stated in regulation 12 of The Administration Regulations, the buy-out price is rounded up or down to the nearest pound sterling.

70. The buy-out fee applies to non-UK ETS energy only, thus, that energy regulated under the ETS is excluded from CCA buy-out calculations.

Rule 8

Rule 8

Variation by inclusion of additional facilities

Covering rules 8.2.3 and 8.3.3.

Inclusion and exclusion of facilities

71. 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.

72. 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 10

Rule 10.1

The Administrator may vary the Target to take account of:

a) any structural changes or other changes, as defined in the Technical Annex, or other changes to the Facility which the Operator must notify to the Administrator under Rule 3.1.2;

b) any errors in the data provided to the Administrator for the Base Year.

Following the principles, methodologies and calculations set out in the Technical Annex.

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

73. The Administrator may vary the target to take account of the circumstances in Rule 10.1.1, 10.1.2 and 10.1.3 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.
74. Structural changes are as described in paragraph 4-5

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.

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
Adapted Novem Methodology	means the unified target-setting methodology used for all facilities, under which a facility must determine, for its base year energy consumption, the Fixed Energy Consumption (FEC), the Variable Energy Consumption (VEC) for each individually observed product and the level of production of each individually observed product.
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 Issue of the CHPQA Standard applying to the CHPQA scheme in question.
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 as amended from time to time; and c) ancillary activities.
Energy target	A target expressed in relative or absolute that includes units of energy, such as kWh, and MWh.

EPR	The Environmental Permitting (England and Wales) Regulations 2016.
Fixed Energy Consumption (FEC)	The portion of a facility's energy use that remains constant regardless of production activity, representing essential operational baseline demand.
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	The energy that a facility 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. Reference energy = base year SEC × target period throughput summed across all separate products.
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.
Variable Energy Consumption (VEC)	The energy a facility uses that varies with production, driven by process loads that rise or fall with operational intensity.

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	Rule 3.1.2 – Text revision to EU references following the end of the transition period for the UK exiting the EU. 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. 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. Annex B – Text revision to add the definition for '*Annex 1 activities*' following the end of the transition period for the UK exiting the EU.
December 2023	Updated Technical Annex published to incorporate changes required for added Target Period 6. Additionally: Rule 3.1.2- Text revision to EU references following the end of the transition period for the UK exiting the EU. Rule 6.3 Text revision to remove reference to COVID-19 impacts. Rule 6.4 Text revision to remove reference to COVID-19 impacts. Annex B- Removal of reference to Annex 1 activities and addition of Schedule 2 activities.
February 2026	Updated Technical Annex published to incorporate changes required for the new scheme starting 1 January 2026.

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