

G24 – CfD Generator Payments

EMRS Guidance

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Change Amendment Record

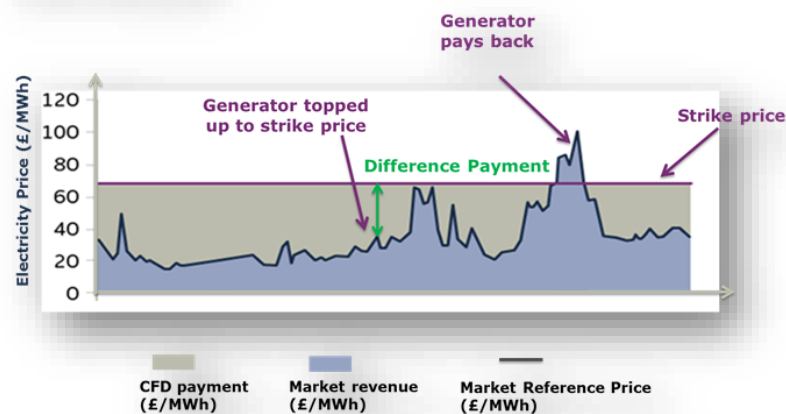
Version	Date	Description
1.0	20 January 2022	Go-Live Version
2.0	14 October 2022	Resolve the issue with the Late Payment Notice references for CfD Generators
3.0	10 July 2023	Reference added to Termination Fees in the CfD contract
4.0	26 October 2023	Annual Review
5.0	28 March 2024	Link Update for Strike Price Adjustment spreadsheet location

1. Introduction

The Contracts for Difference (CfD) scheme is designed to incentivise investment in low carbon generation by offering Difference Payments to Generators. Suppliers are required to fund the CfD arrangements through the Supplier Obligation.

CfD works by ensuring that Generators receive a fixed, pre-agreed price for production of low carbon electricity during the time that the contract is running. This pre-agreed price is referred to as the 'Strike Price'. As shown in the diagram below, should the Market Reference Price rise above the Strike Price, Generators pay back the difference between the Strike price and the Market Reference Price. The CfD allows Generators to stabilise revenues at a pre-agreed level (the Strike price) for the duration of the contract. The CfD Allocation Round Auction process sets the Strike Price where Generators bid into the Auction. The "Difference Amount" is calculated by EMRS on behalf of the Low Carbon Contracts Company (LCCC), which is in turn funded by Licensed Suppliers within the GB Electricity Market based on their market share as per the "The Contracts for Difference (Electricity Supplier Obligations) Regulations 2014".¹

CfD Context



Source of graph: UK Government White Paper, July 2011, licensed under the Open Government Licence v1.0
Source of strike price examples: <https://lowcarboncontracts.uk/cfds>

Please refer to the EMRS Settlement Calendar on the EMR Settlement Ltd (EMRS) website for more information on when payments for CfD Generators are invoiced and due, as well as on the Settlement Date and the Settlement Run².

¹ <https://www.legislation.gov.uk/ukdsi/2014/9780111116784/contents>

² <https://www.emrsettlement.co.uk/publications/settlement-data/>

2. Purpose

The purpose of this document is to answer the following questions:

- What are the different CfD Generator Payments?
- What is a Strike Price Adjustment?
- How are CfD Generator Payments calculated?
- I am a new CfD Generator, when will my first payment be?
- How do I validate my Billing Statement?
- What is the Standard Maximum Contract Capacity?
- What happens if I do not pay?
- What are Termination Events and Fees?

3. Who is this document for?

This guidance is relevant for CfD Generators.

4. Associated documents

This document should be read in conjunction with:

- WP1 – Overview of EMR Settlement
- WP24 – CfD Settlement Required Information
- WP43 – CfD Generator Collateral

5. What are the different CfD Generator Payments?

CfD Generator Payments are based on the difference amount between the appropriate Market Reference Price and the CfD's Strike Price. There are two Market Reference Prices, the Baseload Market Reference Price and the Intermittent Market Reference Price. The CfD contract specifies which Market Reference Price applies, as well as the prices at which Generators sell their electricity under their usual power trading arrangements. Where the Strike Price (within the CfD Generators Contract) is greater than the Market Reference Price, the Difference Payment is calculated and LCCC pay the Generator. Where the Generator's contracted Strike Price is less than the Market Reference Price, the Difference Amount will be negative, and so the Generator will owe money to LCCC. Please note, the Strike Price will differ for each contract.



6. What is a Strike Price Adjustment?

The 'Strike Price' is the price at which Generators have bid in the CfD Allocation Round and is set out in the CfD Agreement. This agreement is signed following allocation and, together with the CfD Standard Terms and Conditions, forms the CfD. To protect the future value of the CfD, the Strike Price is adjusted annually by 1 April, for all CfDs to account for the following changes:

- **CPI:** The Consumer Price Index (CPI) is adjusted once per year to account for inflation.
- **Balancing System Charges:** The Strike Price can be adjusted based on changes resulting from the baseline values for the Allocation Round from which the CfD arose, to Balancing Service Use of System (BSUoS) and Residual cash flow Reallocation cash flow (RCRC).
- **Transmission Losses:** The Strike Price can be adjusted based on changes resulting from the baseline values for the Allocation Round from which the CfD arose, to the Transmission Loss Multiplier (TLM).

In addition, the Strike Price may be adjusted on an ad-hoc basis due to a Qualifying Change in Law or Dispute resolution.

For more information on the Strike Price Adjustment and the Strike Price Adjustment spreadsheet, which is updated annually and shows how the Strike Price is calculated, please see the Strike Price Adjustment webpage on the LCCC website.³ In addition, the Strike Price Adjustment guidance can also be found on LCCC's website⁴. [Appendix 1](#) is a diagram showing how the Strike Price Adjustment is calculated for a Generic CfD Contract.⁵

7. How are CfD Generator Payments calculated?

There are two forms of Market Reference Price, which may be used to calculate the Difference Payment. The type of Market Reference Price per technology is set out in Schedule 3 of the Allocation Framework for each Allocation Round.⁶

³ <https://www.lowcarboncontracts.uk/our-schemes/contracts-for-difference/strike-price-adjustments/>

⁴ <https://www.lowcarboncontracts.uk/resources/guidance-and-publications/strike-price-adjustment-spa-guidance-march-2023/>

⁵ <https://www.gov.uk/government/publications/contracts-for-difference-standard-terms-and-conditions>

⁶ <https://www.gov.uk/government/publications/contracts-for-difference/contract-for-difference>

The information provided for Baseload Market Reference Price (BMRP) and Intermittent Market Reference Price (IMRP) in this document are for standard terms and conditions, but can vary depending on the contract and technology type for an allocation round.

BMRP	<ul style="list-style-type: none"> •Applied to Baseload Technologies such as biomass and Combined Heat and Power (CHP), which are steady and highly controllable generation technology
IMRP	<ul style="list-style-type: none"> •Applied to Intermittent Technologies such as Solar or Wind

How are BMRP Payments calculated?

BMRP is calculated on a seasonal basis using a traded volume weighted average based on forward season data. This data is received daily from the London Energy Brokers' Association (LEBA) and the resultant BMRP is published in April and October of each year on the EMRS website⁷.

EMRS calculate the daily Difference Amount per CfD Generator for each Settlement Day (Billing Period). The difference amount is the CfD Generator loss adjusted metered volumes (subject to any meter capping), subtracted by any dual scheme facilities Imported Electricity Allowance and is capped by MCC. Please see Section 9 for further information on MCC and [Appendix 2](#) for further information on BMRP and IMRP calculations.

Offshore Wind Farms that intend to build in a modular phased way over a multi-year period have to meet the requirements of either a single or apportioned metering phasing agreement. Further information on phased metering can be found in G8 - Contracts for Difference Metering.⁸

The Difference Payments that CfD Generators are required to pay to LCCC are referred to as negative Net Payable Amounts in the CfD Standard Terms and Conditions. Please note, values of Net Payable Amounts (data item J1971⁹) in the backing data (D0365 – CfD Generator Invoice Backing Data¹⁰) will follow the sign convention specified in the contract but will appear as a positive amount on the invoice if the CfD Generator is required to pay.

i – Net Payable Amount is the Aggregate Difference amount in respect of a Billing period, plus any reconciliation amount and any Compensatory interest.

⁷ <https://emrs-beta.elxonhostings.co.uk/settlement-data/settlement-data-roles/>

⁸ <https://www.emrsettlement.co.uk/document/guidance/g8-guidance-contracts-for-difference-metering/>

⁹ <https://www.electralink.co.uk/dtc-catalogue/> - click View Items and enter J1971

¹⁰ <https://www.electralink.co.uk/dtc-catalogue/> - click View Flows and enter D0365

How are Intermittent Technologies payments calculated?

Where the Generator plant uses Intermittent Technologies, the Market Reference Price is referred to as the IMRP. This is calculated using the GB day-ahead hourly price published by the intermittent day ahead indices, EPEX Spot and N2EX, which is used to derive the initial Difference Amount.

Negative Intermittent Market Reference Price

Negative IMRP applies to both Baseload and Intermittent Generators, and are for CfDs that include either of the Negative Pricing terms. However, not all CfD contracts include the provision for negative pricing. There are two versions of negative pricing determined within the contract. Under the first version, a Negative IMRP means that the IMRP has been below £0/MWh for six or more consecutive hours. Under the second version, a negative IMRP means that the IMRP has been below £0/MWh for an hour or more. The difference for those hours is capped to the Strike Price:

$$\text{Difference} = \text{Max} \left[\text{Strike Price} - \text{IMRP}, \text{Strike Price} \right]$$

Depending on the contract, a Rolling Negative Price Period means that the IMRP has been below £0/MWh for either one or more hours, or six or more consecutive hours. It also means the Difference for both Intermittent and Baseload CfDs is zero, hence so is the Difference Amount. Please note that in current backing data the J2000¹¹ will show £0 for negative IMRP. The Market Reference Prices are available on the Settlement Data webpage¹².

Reconciliation Amount

Reconciliation Amounts will include Compensatory Interest calculated for any change, positive or negative, where:

$$\text{Compensatory Interest Amount} = \text{Reconciliation Amount} \times \text{Compensatory Interest Rate} \times \text{Days / 365}$$

¹¹ <https://www.electralink.co.uk/dtc-catalogue/> - click View Items and enter J1971

¹² <https://www.emrsettlement.co.uk/settlement-data/settlement-data-cfd-generators/>

8. I am a new CfD Generator, when will my first payment be?

LCCC will provide EMRS with the CfD Generator notified Start Date and confirmed Start Date. These can be the same day but usually the notified Start Date is earlier as LCCC may need to carry out some additional checks. Where the confirmed Start Date is after the notified Start Date, the first Billing Statement will contain all Settlement Dates from notified Start Date to confirmed Start Date inclusive. Billing Statements will then follow the EMRS Settlement Calendar published on the EMRS website.¹³

The invoice will be dated 2 Working Days (WDs) after the Settlement Administration Agent (SAA) Run Date for the Interim Information (II) settlement run type and will cover any Settlement Dates for which that SAA Run included II data, e.g., Friday/Saturday/Sunday.

Payments due from EMRS to the CfD Generator will be made 28 calendar days from the earliest relevant Settlement Date for which II data is included in the credit note, for example Friday + 28 calendar days. Payments due from the CfD Generator to LCCC will be due 10 WDs from the invoice date. After 10 WDs LCCC will set-off the invoice amount against any credit amount due to the CfD Generator.

CfD Generators are issued either an invoice or a credit note depending on the difference between the Strike Price and Market Reference Price, as well as any Reconciliation Amounts and Compensatory Interest.

[Appendix 3](#) contains a simplified timeline of payments.

9. How do I validate my Billing Statement?

Depending on the method selected at registration, CfD Generators will receive an email containing a PDF of the billing statement and CfD Generator Invoice Backing Data in two formats:

- .CSV (T025)
- .txt format (D0365)¹⁴

You can update the method you receive backing data via My EMRS.¹⁵

If you opted to receive backing data over the Data Transfer Network (DTN), then the D0365 'CfD Generator Invoice Backing Data' flow will be sent over the DTN¹⁶. CfD Generators will still receive an



¹³ <https://www.emrsettlement.co.uk/settlement-data/settlement-data-roles/>

¹⁴ <https://www.electralink.co.uk/dtc-catalogue/>

¹⁵ <https://my.emrsettlement.co.uk/>

¹⁶ <https://www.electralink.co.uk/dtc-catalogue/>

email containing the PDF billing statement and .CSV backing data file. CfD Generators can find their billing statement and backing data on My EMRS¹⁷.

CfD Net Payable Amount payments are processed based on a Generator's volume of generated energy. Revenue received by Generators is a combination of the wholesale energy price or Power Purchase Agreement and the CfD Net Payable Amount (i.e., the difference between the Strike Price and the reference price). The backing data items' names and further details of the D0365 data flow can be found within the Data Transfer Catalogue (DTC)¹⁸.

Due to reconciliation, there may be some instances where there is a discrepancy between the values a CfD Generator receives on an invoice and the amount they expected to receive. Reconciliation Amounts (RA) happen because of a recalculation of the Difference Amount due to updated information. For example, there may be an updated Renewable Qualifying Multiplier or Combined Heat and Power Qualifying Multiplier, etc., as well as any related Compensatory Interest on the Reconciliation Amount.

10. What is the Standard Maximum Contract Capacity?

The Final Installed Capacity (FIC) is the level of capacity commissioned at the Generators Start Date. The FIC is used to set the Maximum Contract Capacity (MCC) under the CfD. Each Allocation Round will have its own budget that will include a capacity cap as well as the monetary budget. Specific details will be announced around four or five months in advance of an Allocation Round opening.

The MCC of an existing contract can be increased or decreased. This may occur for reasons such as, but not limited to, the adjustment of the Installed Capacity Estimate because of: a Permitted Reduction; a Relevant Construction Event; or LCCC acceptance of a Final Installed Capacity Notice. Any retrospective MCC changes will trigger a recalculation of the impacted Billing Periods.

Bids for Allocation Rounds are stacked in Strike Price order starting with the lowest price. The EMR Delivery Body will allocate CfDs on this basis, noting total project valuations, until the Budget or Capacity Cap is breached. Successful participants will receive the clearing price for the relevant year as the auction utilises a pay as clear approach. This means that each Delivery Year will have a clearing price and successful applicants will be uplifted to the Strike Price level of the last affordable project in that Delivery Year. The Administered Strike Price for the applicable technology of the successful Applicant caps the uplift.

¹⁷ <https://my.emrsettlement.co.uk/>

¹⁸ <https://www.electralink.co.uk/dtc-catalogue/>

11. What happens if I do not pay?

CfD Generators must ensure appropriate payment run systems are in place that align with their CfD obligation to ensure payment due dates are not missed. Please contact EMRS if there are any questions regarding late payment, or for further advice on payment due dates.

If a CfD Generator fails to pay, and this is the first instance where payment in full has not been received, EMRS will issue a Late Payment Advice Notice. An example of a Late Payment Advice Notice, as well as more detailed process steps on late payments can be found in Appendix 3 of WP41 - Late Payment Advice Procedure¹⁹. The Late Payment Advice Notice details the payment type, invoice number, total default payment amount and payment due date. Where any payment is not received in full by the due date, interest will be accumulated (where applicable, depending on the CfD Contract).

The amount of interest is calculated and invoiced when the outstanding amount has been paid in full. The total interest amount will be shown on the next invoice.

If there are two failures, then a second payment failure notice will be sent. If there are three payment failures, then the Collateral process is triggered. Collateral must be lodged within set timescales and maintained for the duration of the requirement, even if the CfD Generator makes a subsequent payment. The requirement is normally to maintain the collateral for 12 months until a specified date, known as the Collateral Repayment Date. Further information on the CfD Generator Collateral process, as well as a diagram explaining when collateral is needed, can be found in WP43 - CfD Generator Collateral²⁰.

Please note, if an invoice and a credit note are due on the same day, EMRS will net the invoice against the credit note. If there is a surplus remaining on the invoice, the CfD Generator must pay that amount to EMRS. Likewise, if there is a surplus on the credit note, EMRS will pay that amount to the CfD Generator.

EMRS will net-off any overdue invoices by offsetting against any credit amounts due to the CfD Generator. If there are no credit amounts due to the CfD Generator or if the Net Payment Amount or any Non-Net Payable invoices have not been paid on time, then this will lead to a payment failure. Examples of a Non-Net Payable Amount invoice include Qualifying Change in Law Decisions (QCIL), Generator Tax Compensation (GTC) or Curtailment Compensation.

¹⁹ <https://www.emrsettlement.co.uk/document/working-practice/wp41-late-payment-procedure/>

²⁰ <https://www.emrsettlement.co.uk/document/working-practice/wp43-cfd-generator-collateral/>

12. What are Termination Events and Fees?

A Termination Event happens under the terms of the CfD and as instructed by LCCC, it can happen for a number of reasons including:

- Failure to meet milestone requirements in full and by the stated deadlines;
- Insolvency of the Generator;
- Non-payment by the Generator to LCCC (any Net Payable Amount that has not been paid by the 10th Business Day, or any Non-Net Payable Amount that has not been paid by the 20th Business Day);
- Fraudulent activity by the Generator;
- Failure to declare transfer arrangements; and
- Failure to comply with metering requirements.

If any of the above scenarios occur, a Termination Amount Notice will be sent to the Generator. The Termination Amount is due no later than 30 WDs from when the Termination Amount Notice was sent by LCCC. Interest will be applied (where applicable, depending on the CfD Contract) to the Termination Amount Notice from the day after the payment due date²¹.

There is a Net Payable Amount Cure Period to allow a CfD Generator the time to submit payments. The Net Payable Amount Payment Cure Period is 10 WDs from when the first Late Payment Advice was sent. The Non-Net Payable Amount Cure Period is 20 WDs from when the first Late Payment Advice was sent. The Late Payment Advice will be sent one day, six days and ten days after the payment due date.

If a CfD Generator is terminated, other CfD Generators will not be exposed to additional costs²².

²¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/348142/Generic_CfD_TCs_29_August_2014_.pdf Section 53 Termination Events

²²Termination fee amounts are found in the annex of the CfD Standard Terms and Conditions

13. Need more information?

For more information, please visit our website www.emrsettlement.co.uk or email us at contact@emrsettlement.co.uk. Designated information for CfD Generators is available on our Stakeholder Support webpage²³.

14. Acronyms and Definitions

A list of acronyms and definitions is available in our glossary on our website²⁴.

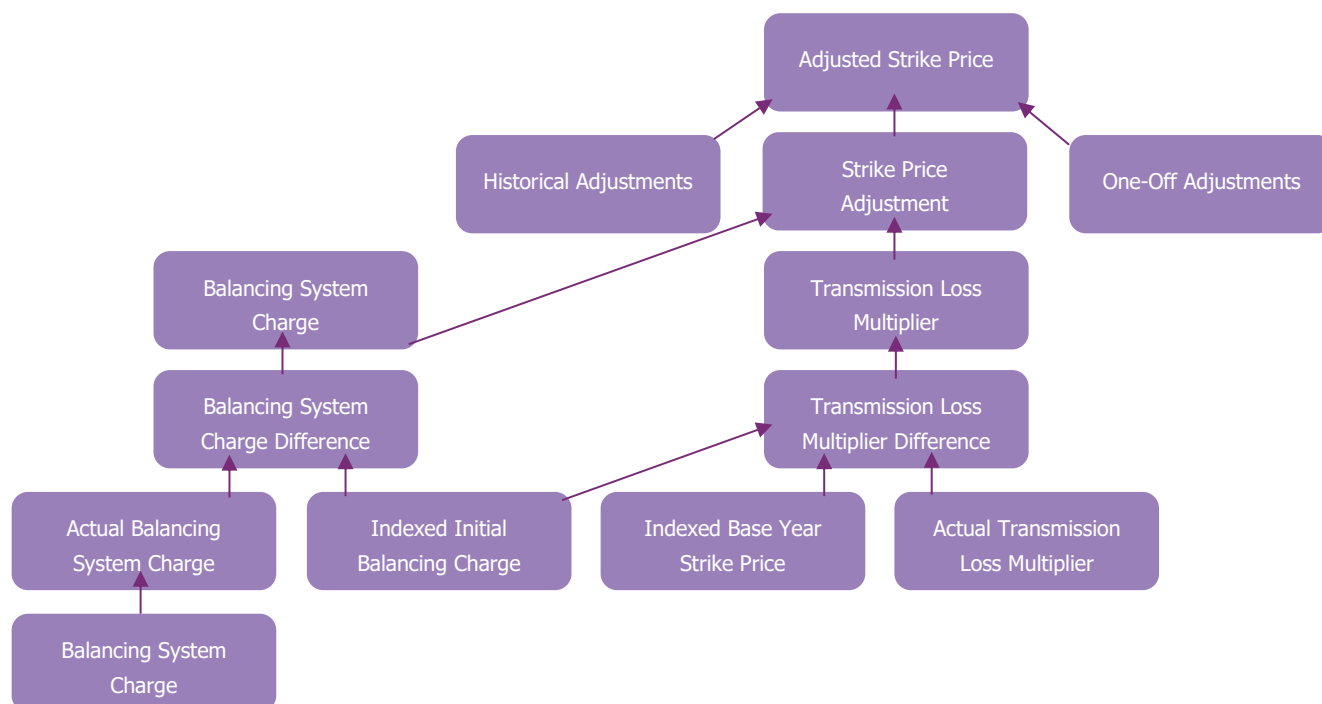
²³ <https://www.emrsettlement.co.uk/stakeholder-support/stakeholder-support-cfd-generators/>

²⁴ <https://www.emrsettlement.co.uk/glossary/>

15. Appendices

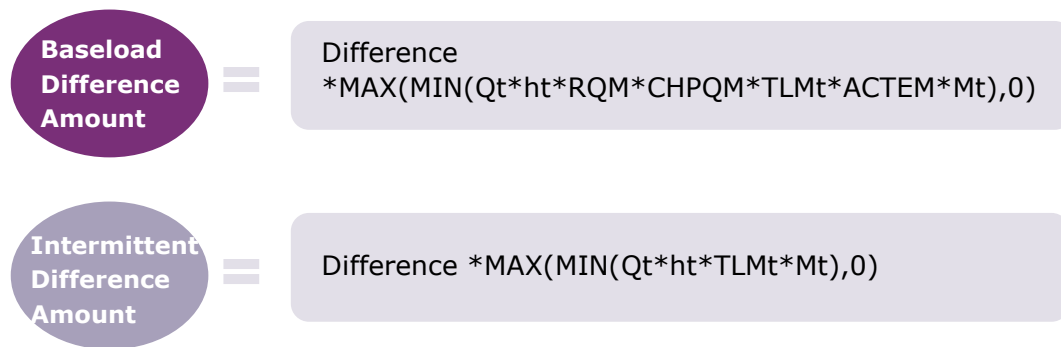
15.1 Appendix 1: Calculating Strike Price Adjustment for a Generic CfD

The diagram below gives a high-level overview of the different aspects that factor into the Adjusted Strike Price calculation. Further information on this can be found on the LCCC website²⁵.



²⁵ <https://www.lowcarboncontracts.uk/our-schemes/contracts-for-difference/strike-price-adjustments/>

15.2 Appendix 2: Baseload Market Reference Price and Intermittent Technologies Payment Calculations



Difference = $\text{Min}(\text{SPt} - \text{MRPt}, \text{SPt})$.

Qt: Maximum Contract Capacity applicable to a Settlement Unit (t).

ht: Number of hours in a Settlement Unit (t).

SPt: is the Strike Price in Settlement Unit (t).

MRPt: is the market Reference Price applicable to Settlement Unit (t).

RQM: The Renewable Qualifying Multiplier (RQM) is calculated for each month of electricity generation and is applied to any 'Settlement Units' falling in that calendar month. The RQM determines the payments made to Generators based on the renewable content of their fuels, as determined by Fuel Measurement and Sampling (FMS). Generators are required to provide monthly output data and FMS details to allow RQM calculations. LCCC also have the right to perform FMS audits. If LCCC intend to carry out an FMS Audit, then they will give an FMS Notice to the Generator that will include the date by which the Generator must permit the exercise of the FMS Audit Right.

CHPQM: Combined Heat and Power Qualifying Multiplier (CHPQM) ensures only generated output from low carbon sources that provide good quality Combined heat and Power are provided with CfD payments. Generators must maintain their Combined Heat and Power Quality Assurance certification annually once operating and for the duration of any CfD offered in order to continue to receive support.

TLM: The Transmission Loss Multiplier (TLM) is allocated in accordance with the Balancing and Settlement Code (BSC), or any new or substituted multiplier or factor which is in the nature of, or similar to, a TLM in Settlement Unit.

ACTEM: is the ACT Efficiency Multiplier in the Settlement Unit (t) if the ACT Efficiency Multiplier is expressed to apply to the Contracts for Difference in the CfD Agreement or, otherwise, one (1).

M: Metered Output during Settlement Unit (t).

15.3 Appendix 3: Payments Timeline

The timeline below shows at a high level when CfD Generators can expect to be paid and a Billing statement is issued.

