

# **PRIVATE NETWORK METERING OPERATIONAL FRAMEWORK**

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**ACRONYMS**

BS EN: British Standard European Norm

CfD: Contract for Difference

HHU: Hand-held unit

KVArh: Kilovoltamperes reactive hour

kW: Kilowatt

kWh: Kilowatt hours

## **DEFINITIONS**

Terms not defined in this Private Network Metering Operational Framework shall have the meanings given to them in the Private Network CfD Agreement (to the extent they are defined therein) or, to the extent that they are not defined either in this document or in the Private Network CfD Agreement, the meanings given to them in the Private Network Technical System Requirements from time to time. To the extent that a term is defined in both the Private Network CfD Agreement and this document, then in relation to the standards in relation to metering set out herein only (and not in relation to the obligations of the Generator or the CfD Counterparty pursuant to the Private Network CfD Agreement), the definition in this document shall apply instead of the definition in the Private Network CfD Agreement.

**Active Energy** means the electrical energy produced, flowing or supplied by an electric circuit during a time interval, being the integral with respect to time of instantaneous active power, measured in units of watt-hours or standard multiples thereof.

**CfD Audit** means an audit, check, examination or inspection conducted by the CfD Counterparty and/or its appointed representative in accordance with the Private Network CfD Agreement, Section B of this Private Network Metering Operational Framework and the Private Network Technical System Requirements:

- (A) once every three years in accordance with the timings set out in Section B of this Private Network Metering Operational Framework (a "**Routine CfD Audit**"); and
- (B) with such greater frequency as considered necessary by the CfD Counterparty for the purpose of carrying out such CfD Audits, acting reasonably (a "**Non-Routine CfD Audit**").

**CfD Counterparty** means Low Carbon Contracts Company Limited, a company incorporated under the laws of England and Wales whose registered office is [●] and whose company number is 08818711.

**CfD Settlement Activities** means:

- (A) the calculation, invoicing, reconciliation and settlement of payments to be made pursuant to the Private Network CfD Agreement; and
- (B) the calculation of collateral requirements and the provision of collateral in accordance with the Conditions;

**CfD Settlement Services Provider** means any person appointed for the time being and from time to time by the CfD Counterparty to carry out any of the CfD Settlement Activities, or who is designated by the Secretary of State to carry out the CfD Settlement Activities.

**Check Meter** means the Metering Equipment that the Generator is required to install and maintain under paragraph 3.2.3 of Section A of this Private Network Metering Operational Framework for each Main Meter installed by the Generator.

**Communications Equipment** means in respect of any Metering Equipment:

- (A) the terminating equipment (which may include a modem) necessary to convert data from such Metering Equipment into a state for transmission to the CfD Counterparty or the CfD Settlement Services Provider; and
- (B) the exchange link which is connected to that terminating equipment, including (for the avoidance of doubt) any Outstation.

**Conditions** means the terms and conditions set out in version 1 of the document entitled “FiT Contract for Difference Standard Terms and Conditions” as at [date] (as amended, modified, supplemented or replaced by the Private Network CfD Agreement and as may be amended, modified, supplemented or replaced from time to time in accordance with the Conditions).

**Consumption Data Comparison Check** means the checking process described in paragraph 3.2.5 of Section B of this Private Network Metering Operational Framework and in paragraph 6.1.2 of the Private Network Technical System Requirements.

**Correct Energy Measurement Check** means the checking process described in paragraph 3.2.4 of Section B of this Private Network Metering Operational Framework and in paragraph 6.1.1 of the Private Network Technical System Requirements.

**Customer Metered Volume** means, in relation to a Settlement Unit, the volume of Electricity determined as at a Customer Metering Point, which flowed in relation to that Settlement Unit, and where there are multiple Customer Metering Points, the Customer Metered Volume shall mean the aggregate of the input volumes of Electricity supplied by the Generator to the Onsite Customers as measured at those Customer Metering Points (but, for the avoidance of doubt, where the Generator is an Islanded Generator, the Customer Metered Volume shall be equal to zero (0)).

**Customer Metering Point** means, in relation to an Onsite Customer, a Meter located at that Onsite Customer for the purposes of measuring the Electricity supplied by the Generator to that Onsite Customer for the CfD Settlement Activities.

**Customer Meter** means the Meter of an Onsite Customer for the purposes of measuring the Customer Metered Volume.

**Delivery Body** means the person from time to time responsible pursuant to section 12(1) of the EA 2013 for notifying the CfD Counterparty to offer and enter into FiT Contracts for Difference.

**Distribution Licence** means a licence granted or treated as granted pursuant to section 6(1)(c) of the EA 1989.

**Distribution System** means the system for the distribution of Electricity within Great Britain operated by Licensed Distributors.

**Distribution System Operator** means:

- (A) a Licensed Distribution System Operator; or

- (B) any other party which distributes Electricity for the purposes of section 4(1)(bb) of the EA 1989 (as inserted or to be inserted by section 28 of the Utilities Act 2000) through a Distribution System, acting in that capacity.

**EA 1989** means the Electricity Act 1989.

**EA 2013** means the Energy Act 2013.

**Electricity** means Active Energy.

**Facility** means the facility identified as such in the Private Network CfD Agreement.

**FiT Contract for Difference** means:

- (A) a contract for difference (as such term is defined in section 6(2) of the EA 2013); or
- (B) an investment contract (as such term is defined in Schedule 2 to the EA 2013).

**GB Transmission System** means the system consisting (wholly or mainly) of high voltage electric lines owned by Transmission Licensees within Great Britain that is used for the transmission of Electricity from one (1) generating station to a substation or to another generating station or between substations or to or from any interconnector.

**Generating Station** means an installation comprising the Facility and one (1) or more other Generating Units (other than an interconnector and even where those Generating Units are situated separately) which the CfD Counterparty considers (acting reasonably) as being managed as, or comprising, one (1) power station or one (1) power generating station.

**Generating Unit** means any apparatus which produces Electricity.

**Generator** means the person identified as such in the Private Network CfD Agreement.

**Generator Metered Volume** means, in relation to a Settlement Unit, the net aggregate volume of exports and imports of Electricity determined as at the Generator Metering Point, which flowed in that Settlement Unit.

**Generator Metering Point** means the point at which Generator Metered Volume is measured for the purposes of the CfD Settlement Activities and is net of any Generating Unit demand for Electricity.

**Half-Hourly Metering Equipment** means the Metering Equipment which provides measurements on a half-hourly basis for the purposes of the CfD Settlement Activities.

**Invitee** means each of:

- (A) the CfD Counterparty acting through any reasonably nominated employee, agent or contractor of the CfD Counterparty;

- (B) the Technical Assurance Agent, acting through any reasonably nominated employee, agent or contractor; and
- (C) the CfD Auditor acting through any partner or employee.

**Licensed Distributor** means a person who is authorised pursuant to a Distribution Licence to distribute electricity.

**Key Meter Technical Details** means those items set out in paragraph 7.3 of the Private Network Technical System Requirements.

**Licensed Distribution System Operator** means a party which holds a Distribution Licence in respect of distribution activities in Great Britain, acting in that capacity.

**Main Meter** means the Metering Equipment that the Generator is required under paragraph 3.2.3 of Section A of this Private Network Metering Operational Framework to install to measure Electricity supplied by the Generator.

**Market Supply Agreement** means an agreement between the Generator and a counterparty in relation to the Facility pursuant to which the counterparty agrees to purchase the Electricity generated by the Facility for a defined period.

**Material Change** means a change to the Metering Equipment or Communications Equipment other than a change by way of repair, modification or replacement of any component which is not a substantial part of the Metering System even where an enhanced or equivalent component is used for the repair, modification or replacement rather than an identical component.

**Measurement Transformers** means either a current transformer (CT) or a voltage transformer (VT) or a device carrying out both such functions, whose purpose is to enable the Metering Equipment to operate at more convenient currents and/or voltages (as applicable) than are present on the power system being measured.

**Meter** means a device for measuring Active Energy or Reactive Energy.

**Meter Register** means the physical Meter reading displayed in kWh or kVAh.

**Meter Commissioning Test** means the Meter commissioning test described in paragraph 7.1 of the Private Network Technical System Requirements.

**Meter Technical Details** means all technical details (including Outstation channel mapping) of a Metering System required to enable metered data to be collected and correctly interpreted from that Metering System as referred to in this Private Network Metering Operational Framework and the Private Network Technical System Requirements.

**Metered Volume** means the Customer Metered Volume and/or the Generator Metered Volume, as the context requires.

**Metering Equipment** means Meters, Measurement Transformers, metering protection equipment including alarms, circuitry, associated Communications Equipment and Outstations and wiring and shall include any Customer Meter and associated Metering Equipment.

**Metering Points** means the Generator Metering Point and the Customer Metering Point.

**Metering System** means particular commissioned Metering Equipment installed for the purposes of measuring the quantities of exports and imports at the Generator Metering Point.

**Non-Routine CfD Audit** has the meaning given to that term in limb (B) of the definition of CfD Audit in this Private Network Metering Operational Framework.

**Onsite Customer** means a customer of which the Generator is the supplier of Electricity pursuant to a Market Supply Agreement and which is located on the same Private Network as the Generator.

**Outstation** means equipment which receives and stores data from a Meter(s) for the purpose, inter alia, of the transfer of that data to the CfD Counterparty, and which may perform some processing function before such transfer, and which may be one or more separate units or be integral with the Meter.

**Primary Energy** means Active Energy being produced by the Generator.

**Private Network CfD Agreement** means the FiT Contract for Difference entered into between the Generator and the CfD Counterparty in relation to the Facility.

**Private Network Dispute Resolution Procedure** means the dispute resolution procedure for Private Network Generators set out in the Generator's Private Network CfD Agreement.

**Private Network Generator** means a Generator which:

- (A) is exempt from the requirement to hold a license for the generation of Electricity pursuant to the Electricity (Class Exemptions from the Requirement for a License) Order 2001; and
- (B) does not exclusively generate Electricity for or convey Electricity on a licensed Distribution System or the licensed Transmission System.

**Private Network Metering Operational Framework** means this document.

**Private Network Technical System Requirements** means the document containing technical information relating to Metering Points, measured quantities and demand values for Metering Systems, Metering Equipment criteria and commissioning, records and proving, as set out in Annex [●] of the Conditions.

**Proving Test** means the test described in paragraph 3.1.5(c) of Section C, or as otherwise agreed in accordance with paragraph 3.1.5(d) of Section C, of this Private Network Metering Operational Framework.

**Reactive Energy** means the electrical energy produced, flowing or supplied by an electric circuit in quadrature to Active Energy at a time interval, being the integral with respect to time of instantaneous reactive power, measured in units of volt ampere reactive hours or standard multiples thereof.

**Routine CfD Audit** has the meaning given to that term in limb (A) of the definition of CfD Audit in this Private Network Metering Operational Framework.

**Secretary of State** means the Secretary of State for Energy and Climate Change.

**Settlement Period** means a period of 30 minutes beginning on the hour or the half-hour.

**Settlement Unit** has the meaning given to that term in the Private Network CfD Agreement.

**Technical Assurance** means compliance by the Generator with the requirements, in relation to Metering Systems, of this Private Network Metering Operational Framework and the Private Network Technical System Requirements.

**Technical Assurance Agent** means the CfD Counterparty third-party agent or representative appointed by the CfD Counterparty as responsible for Technical Assurance.

**Third Party** means each of the CfD Settlement Services Provider, the Secretary of State, the Delivery Body and their respective representatives.

**Total System** means the Transmission System and each Distribution System.

**Transmission Licence** means an electricity transmission licence granted or treated as granted pursuant to section 6(1)(b) of the EA 1989 that authorises a person to transmit Electricity.

**Transmission Licensee** means any person who is authorised by a Transmission Licence to transmit electricity.

**Transmission System** means those parts of the GB Transmission System that are owned by a Transmission Licensee within the transmission area specified in its Transmission Licence.



## PRIVATE NETWORK METERING OPERATIONAL FRAMEWORK

### GENERAL APPLICATION

The Generator shall comply at all times with the requirements of this Private Network Metering Operational Framework (as amended from time to time).

Amendments to the Private Network Metering Operational Framework shall be subject to the Change Control Procedure in Annex 2 (*Change Control Procedure*) to the Conditions.

### SECTION A: Metering – General

#### 1. INTRODUCTION

1.1.1 This Section sets out:

- (a) requirements for the installation, commissioning, operation and maintenance of Half-Hourly Metering Equipment, Main Meters, Check Meters and Customer Meters (where applicable) for the measurement of quantities generated by any party; and
- (b) the functions of any agents appointed by the CfD Counterparty in connection with such Metering Equipment.

1.1.2 For the purposes of this Private Network Metering Operational Framework, the quantities of Active Energy and, where relevant, quantities generated by any party at a Metering Point shall be measured and recorded through Metering Equipment installed, commissioned, operated and maintained and otherwise provided for as set out in this Section.

1.1.3 In this Section:

- (a) in relation to any Metering System, references to requirements under the Private Network Technical System Requirements shall be construed as requirements in relation to all of the Metering Equipment comprised or required to be comprised in that Metering System;
- (b) references to a Metering System include a Metering System which is to comprise Metering Equipment which a Third Party is or will be required to install;
- (c) references to Metering Equipment in the context of a Metering System or its Generator are to all of the Metering Equipment which is or is to be comprised in such Metering System and include any Customer Meter and associated Customer Metering Equipment;
- (d) "**commission**" means commission for the purposes of the CfD Settlement Activities in accordance with this Private Network Metering Operational Framework and Private Network Technical System Requirements and "commissioned" and other derivative terms shall be construed accordingly.

## **2. RESPONSIBILITY OF GENERATOR FOR METERING EQUIPMENT**

- 2.1.1 The principal functions of a Generator or its agent shall be to install, commission, test, maintain, rectify faults and provide a sealing service in respect of Metering Equipment (including, if applicable, associated Communications Equipment), in accordance with the Private Network Technical System Requirements.
- 2.1.2 The Generator of each Metering System shall comply with or (as appropriate) procure that any appointed agent complies with the requirements of the Private Network Metering Operational Framework.

## **3. METERING EQUIPMENT – BASIC REQUIREMENTS**

### **3.1 Generator responsibilities**

- 3.1.1 The Generator shall ensure that Metering Equipment is:

- (a) installed and commissioned (if not already installed and commissioned); and
- (b) maintained and operated,

for the purposes described in paragraph 1.1.2 in accordance with and subject to the provisions of this Section and in accordance with the Private Network Technical System Requirements.

### **3.2 Type of Metering Equipment**

- 3.2.1 The Metering Equipment to be installed shall be Half-Hourly Metering Equipment.
- 3.2.2 The Metering Equipment to be installed should be in accordance with Schedule 7 of the EA 1989.
- 3.2.3 The Generator shall ensure that Main Meters, Check Meters and Customer Meters (where applicable) are installed and maintained.
- 3.2.4 In relation to any Metering System, the Generator shall ensure that Metering Equipment is installed and commissioned in accordance with the Private Network Technical System Requirements.

### **3.3 Meter Technical Details**

- 3.3.1 The Generator of each Metering System shall, in accordance with this Private Network Metering Operational Framework and the Private Network Technical System Requirements:
- (a) establish and maintain Meter Technical Details in respect of the Metering Equipment;
  - (b) ensure that such Meter Technical Details are true, complete and accurate; and

- (c) provide such Meter Technical Details to the CfD Counterparty if requested.

### **3.4 Information and records**

3.4.1 The Generator of each Metering System shall:

- (a) comply with the requirements of its Private Network CfD Agreement to provide to the CfD Counterparty information relating to the Metering Equipment;
- (b) provide to the CfD Counterparty all such information regarding the Metering Equipment as the CfD Counterparty shall reasonably require for the purposes of carrying out the CfD Audit; and
- (c) provide to the CfD Counterparty all such information regarding the voltage level to which their Metering System is connected.

3.4.2 The information to be provided under paragraphs 3.4.1(a) and (b) includes information regarding the dates and time periods for installation of new Metering Equipment and the dates and periods when such Metering Equipment is out of service.

3.4.3 The Generator of each Metering System shall:

- (a) prepare and maintain, for the life of the relevant item of Metering Equipment, complete and accurate records as required by the CfD Counterparty; and
- (b) provide a copy of such records to the CfD Counterparty upon request.

### **3.5 Compliance with the Private Network Technical System Requirements**

3.5.1 All Metering Equipment shall comply with or exceed the requirements referred to or set out in the applicable Private Network Technical System Requirements.

3.5.2 The Generator shall provide such evidence as the CfD Counterparty may require to confirm that, following its commissioning, the Metering Equipment meets the requirements of the Private Network Technical System Requirements. This evidence must be traceable and dated.

3.5.3 Subject to paragraphs 3.5.4 and 3.6, the Private Network Technical System Requirements in respect of any Metering Equipment shall be the version of the Private Network Technical System Requirements which is expressed to be applicable to that Metering Equipment at the time that the Metering System comprising the Metering Equipment is first installed, and such Metering Equipment shall only be required to comply with that version of the Private Network Technical System Requirements, and not with any Private Network Technical System Requirements which in any respect later amends, modifies or supersedes that version of the Private Network Technical System Requirements.

3.5.4 For the avoidance of doubt, in relation to the calibration, testing and commissioning of any Metering Equipment at any time, the applicable Private Network Technical System

Requirements shall be the latest version of the Private Network Technical System Requirements prevailing at that time.

### **3.6 Material Change**

3.6.1 Notwithstanding paragraph 3.5, where any Material Change is made to any Metering Equipment, the version of the Private Network Technical System Requirements current at the time of that Material Change shall, from that time, be the Private Network Technical System Requirements in respect of that Metering Equipment as so changed as if that date was the date of that Metering System's first commissioning.

### **3.7 Calibration, commissioning and maintenance of Metering Equipment**

3.7.1 The Generator of each Metering System shall ensure that the Metering Equipment shall be calibrated, maintained and commissioned in accordance with the applicable Private Network Technical System Requirements.

3.7.2 The Generator shall, at its own cost and expense, ensure that the Metering Equipment is kept in good working order, repair and condition to the extent necessary to allow the correct registration, recording and transmission of the requisite details of the Metered Volume measured by the relevant Metering System.

3.7.3 If Metering Equipment is removed, replaced or otherwise changed, then its commissioning record should be retained by the Generator and must be provided to the CfD Counterparty upon request.

### **3.8 Testing and inspection**

3.8.1 The Generator shall ensure that routine audits, tests and checks are carried out to confirm the accuracy of the Metering Equipment, in addition to the CfD Audits carried out by the CfD Counterparty (or its appointed representative).

3.8.2 The Generator shall ensure that a test of the accuracy of all Metering Equipment which replaces defective or inaccurate Metering Equipment is carried out as soon as is reasonably practicable after its installation.

3.8.3 The Generator shall give the CfD Counterparty reasonable prior notice of the date, time, place and nature of every test pursuant to paragraph 3.8.1, and the CfD Counterparty shall have the right to attend such a test.

3.8.4 If the Generator or any other Third Party has reason to believe that the Metering Equipment is not within the applicable limits of accuracy, or otherwise for any reason is incorrectly recording data, the Generator or such other Third Party shall so notify:

- (a) the CfD Counterparty; and
- (b) the Generator (if relevant).

- 3.8.5 The CfD Counterparty shall appoint a Technical Assurance Agent to conduct an inspection of the Metering Equipment as part of the Generator's CfD Audit once every three years on the basis set out in paragraph 3.4 of Section B of this Private Network Metering Operational Framework. The timing and frequency of such an inspection shall be independent of any inspection carried out or otherwise attended by the CfD Counterparty under paragraphs 3.8.3 or 3.8.6. The CfD Counterparty shall give the Generator notice of its intention to carry out such an inspection, setting out the date on which it proposes to do so, which shall generally be no sooner than ten (10) working days after the date of the notice.
- 3.8.6 Reasonable costs incurred in undertaking a Routine CfD Audit, including reasonable costs incurred by the CfD Counterparty and/or its appointed representative in attending the Facility and any Onsite Customer and further including the costs of any tests which form part of that Routine CfD Audit, shall be borne by the Generator (but without prejudice to its right to charge any other person for such service pursuant to another agreement or arrangement). All other costs of the CfD Counterparty or its appointed representative in relation to the Routine CfD Audit shall be borne by the CfD Counterparty.
- 3.8.7 If the CfD Counterparty is notified (under paragraph 3.8.4(a)) or otherwise has reason to believe that any Metering Equipment is not performing within the applicable limits of accuracy:
- (a) the CfD Counterparty may require the Generator to inspect and then test the accuracy of such Metering Equipment within a reasonable time of, and in any event no later than ten (10) working days after, the CfD Counterparty giving notification of such requirement pursuant to this paragraph 3.8.6, whereupon the Generator shall carry out such test in the presence of a representative of the CfD Counterparty; or
  - (b) the CfD Counterparty may as part of a Non-Routine CfD Audit and without giving notice to the relevant Generator, arrange for the inspection of such Metering Equipment by a Technical Assurance Agent, and for such person(s) to make such tests as such person(s) shall deem necessary to determine its accuracy, and the Generator shall cooperate with such person(s) in carrying out such tests. A Technical Assurance Agent shall be entitled to assume that all required consents have been obtained for the relevant inspection until such time as it is fixed with notice to the contrary.
- 3.8.8 Reasonable costs incurred in undertaking a Non-Routine CfD Audit, including reasonable costs incurred by CfD Counterparty and/or its appointed representative in attending the Facility and any Onsite Customer and further including the costs of any tests which form part of that Non-Routine CfD Audit, shall be borne by the Generator (but without prejudice to its right to charge any other person for such service pursuant to another agreement or arrangement). However, where the Generator is found not to be in material breach of any requirement pursuant to this Private Network Metering Operational Framework or the Private Network Technical System Requirements, any costs reasonably incurred by the Generator in carrying out any inspections and tests required by the CfD Counterparty as part of the Non-Routine CfD Audit (but excluding any costs associated with the attendance of the Generator or its representatives), shall be borne by the CfD Counterparty. For the purposes of this paragraph, "material

breach” shall mean a breach which has a material impact on the Information in relation to Metered Volume provided for the purposes of the CfD Settlement Activities.

3.8.9 Any test carried out pursuant to this paragraph 3.8 shall comply with the Private Network Technical System Requirements.

3.8.10 In this paragraph 3.8, reference to testing shall include the use and installation of a Check Meter if appropriate.

### **3.9 Sealing and security**

3.9.1 The Generator shall procure that the Metering Equipment shall be sealed in accordance with the Private Network Technical System Requirements.

3.9.2 The Generator shall procure that the Metering Equipment shall be as secure as is possible in all the circumstances.

3.9.3 The Generator shall notify the CfD Counterparty if the Metering Equipment’s seal is broken or damaged.

### **3.10 Defective Metering Equipment**

3.10.1 If at any time any Metering Equipment is destroyed or damaged or otherwise ceases to function, or is or is found to be outside the applicable limits of accuracy, the Generator shall:

- (a) notify the CfD Counterparty of such defective Metering Equipment within one (1) working day of identifying such defective Metering Equipment; and
- (b) subject to compliance with its obligations under paragraph 3.9, adjust, renew or repair the same or replace any defective component so as to ensure that such Metering Equipment is back in service and the Metering Equipment is operating within the applicable limits of accuracy as quickly as is reasonably practicable in all the circumstances. The Generator should notify the CfD Counterparty within five (5) working days of remediating the relevant fault.

## **4. METERING DATA**

### **4.1 Ownership of metering data**

4.1.1 Subject to paragraph 4.1.2 the Generator shall own the metering data acquired from a Metering System, and may provide to any person access to and use of such data.

4.1.2 The Generator shall not exercise any rights in relation to, or provide to any person any use of or access to, metering data in a manner which would interfere with the CfD Settlement Activities or would otherwise be inconsistent with giving effect to the Private Network CfD Agreement or the Private Network Metering Operational Framework.

### **4.2 Access to and use of metering data**

4.2.1 The Generator of each Metering System shall provide access to, and hereby authorises the use of, metering data, to and by the CfD Counterparty (for the purposes of this paragraph 4.2.1, the "**data recipient**", which term shall include any officer, director, employee, agent or adviser of the same), without charge, for all purposes for which each such data recipient requires such access and use pursuant to or in order to give effect to the Private Network Metering Operational Framework, but not for any other purposes.

4.2.2 The Generator of each Metering System shall provide relevant metering data to:

- (a) each other Third Party; and
- (b) any other person,

who (in either case) is entitled to receive such data in accordance with the Private Network CfD Agreement, the Private Network Metering Operational Framework or the Private Network Technical System Requirements.

4.2.3 For the purposes of paragraph 4.2.2, "**relevant metering data**" means the metering data specified in the Private Network CfD Agreement, whether expressly described as such or not.

### **4.3 Frequency of metering data submission**

4.3.1 Should the CfD Counterparty approve a request by the Generator to change the frequency with which it provides details of Metered Volume to the CfD Settlement Services Provider pursuant to its Private Network CfD Agreement, the CfD Counterparty may charge an administrative fee to cover its reasonable costs in relation to such change. The amount of any such fee shall be published by the CfD Counterparty from time to time.

## **5. ACCESS TO PROPERTY**

### **5.1 Grant and procurement of rights**

5.1.1 The Generator shall make provision for the CfD Counterparty and any Invitee to access to any part of the relevant property.

5.1.2 In this paragraph 5, the "**relevant property**" is:

- (a) the Generating Station;
- (b) the Metering System;
- (c) any Customer Meters and associated Metering Equipment;
- (d) the property of any third-party the exercise of whose rights would prevent the Generator, the CfD Counterparty or any Invitee from performing their obligations.

5.1.3 The Generator shall allow the CfD Counterparty and its agents and representatives full rights to perform such tasks and to do all such acts and things as are necessary for the purpose of performing audits, tests, reviews and checks, including full right to carry out such tests on the Generator's Metering Equipment, provided that the person or persons allocated to carry out such tests by the CfD Counterparty is or are suitably qualified in the operation of Metering Equipment.

5.1.4 The rights referred to in paragraphs 5.1.1 and 5.1.2 are:

- (a) for any Invitee, full right to enter upon and through and remain upon, or do any other act contemplated by this Section A;
- (b) for the CfD Auditor, full right to perform such tasks and to do all such acts and things as are necessary for the purpose of performing audits, tests, reviews and checks for the purposes of the CfD Audit, including full right to carry out such tests on Metering Equipment, provided that the person or persons allocated to carry out such tests by the CfD Auditor is or are suitably qualified in the operation of Metering Equipment;
- (c) for the Technical Assurance Agent(s), full right to undertake on-site tests and checks and to report on Metering Systems in relation to their compliance with the Private Network Technical System Requirements and this Section A,

but in each case only to the extent such rights are necessary for the purposes of the Private Network Metering Operational Framework, and subject to the other provisions of this paragraph 5.

## **5.2 Safe access**

5.2.1 Subject to the right of the CfD Counterparty to require inspection without notice pursuant to paragraph 3.8.7(b), the Generator of each Metering System shall use all reasonable endeavours to procure that all reasonable arrangements and provisions are made, and revised from time to time, as and when necessary or desirable to facilitate the safe exercise by any Invitee of any right of access granted pursuant to paragraph 5.1 with the minimum of disruption, disturbance and inconvenience.

5.2.2 Such arrangements and provisions may, to the extent that the same are reasonable, limit or restrict the exercise of such right of access and/or provide for the Generator to make directions or regulations from time to time in relation to a specified matter.

5.2.3 Matters to be covered by such arrangements and/or provisions include:

- (a) the identification of any relevant Metering Equipment;
- (b) the particular access routes applicable to the land in question having particular regard to the weight and size limits on those routes;
- (c) any limitations on times of exercise of the right of access;



- (d) any requirements as to prior notification and as to authorisation or security clearance of individuals exercising such right of access and procedures for obtaining the same;
- (e) the means of communication by the Generator (to all persons, agents, employees and/or contractors who may be authorised from time to time to exercise such right of access) of any relevant directions or regulations made by the Generator;
- (f) the identification of and arrangements applicable to personnel exercising the right of access granted under paragraph 5.1;
- (g) where relevant, compliance with the Private Network Technical System Requirements on procedures; and
- (h) disclosure of any known hazards on the site.

5.2.4 The CfD Counterparty shall take all reasonable steps to secure that any Invitee agrees to observe and perform any such arrangements and all provisions (or directions or regulations issued pursuant thereto), failing which in any particular case the Generator may take reasonable steps to ensure that, as a condition of exercising any right of access pursuant to paragraph 5.1, each Invitee shall agree to observe and perform the same.

### **5.3 Damage**

5.3.1 The CfD Counterparty shall take all reasonable steps to secure that each Invitee takes all reasonable steps in the exercise of any right of access under paragraph 5.1, to:

- (a) avoid or minimise damage in relation to any relevant property; and
- (b) cause as little disturbance and inconvenience as possible to any other Third Party, third-party or other occupier of any relevant property,

and shall make good any damage caused to such property in the course of the exercise of such rights as soon as may be practicable.

5.3.2 Subject to paragraph 5.4.1, all such rights of access shall be exercisable by the CfD Counterparty free of any charge or payment of any kind.

### **5.4 Denial of access**

5.4.1 The CfD Counterparty shall not be held in breach of any duty or obligation under the Private Network Technical System Requirements or this Private Network Metering Operational Framework to the extent that it is unable to perform such duty or obligation by reason of its being denied necessary access to Metering Equipment.

## **SECTION B: Technical Assurance**

### **1. TECHNICAL ASSURANCE**

- 1.1.1 The CfD Counterparty shall appoint a Technical Assurance Agent to carry out inspections of the Metering Equipment as it sees fit. For the avoidance of doubt, for the purposes of this Private Network Metering Operational Framework and as the context requires, the Technical Assurance Agent shall be an agent of the CfD Counterparty.
- 1.1.2 The Technical Assurance Agent shall monitor Technical Assurance and identify cases where there is any absence of Technical Assurance (“**non-compliance**”).
- 1.1.3 The Technical Assurance Agent shall meet all of the following criteria:
- (a) possess an appropriate level of knowledge of metering and technical systems;
  - (b) coverage and expertise that includes the geographic location of the Facility; and
  - (c) be authorised by a Licensed Distribution System Operator.

### **2. NON-COMPLIANCE**

- 2.1.1 The Technical Assurance Agent shall determine in respect of those matters or things (including those associated with or connected to a Metering System) which it has been requested to audit, that such matter or thing is non-compliant if the requirements of this Private Network Metering Operational Framework and the Private Network Technical System Requirements are not being adhered to and/or if configurable meter parameters are not consistent with the Meter Technical Details supplied by the Generator.
- 2.1.2 Where non-compliance has been determined in accordance with paragraph 2.1.1 of this Section B, the Generator shall ensure that the non-compliance is rectified as soon as reasonably practicable.
- 2.1.3 Following the rectification of non-compliance (as determined in accordance with paragraph 2.1.1 of this Section B) which is materially non-compliant, the CfD Counterparty shall, where in its discretion it considers it appropriate to do so having regard to the nature of such rectification, require the Generator to carry out the relevant validation tests as set out in the Private Network Technical System Requirements, and the CfD Counterparty or the Technical Assurance Agent may attend and/or request details if any such testing carried out.

### **3. AUDIT**

#### **3.1 Reasons for requesting a Non-Routine CfD Audit**

- 3.1.1 The CfD Counterparty may conduct a Non-Routine CfD Audit for the following reasons (which shall not be exhaustive):
- (a) the CfD Counterparty has reason to suspect invalid Meter Technical Details;

- (b) the CfD Counterparty has reason to suspect data retrieved from a Metering System is incorrect;
- (c) data retrieved from a Metering System failed validation;
- (d) consumption data is detected on a Metering System registered as de-energised;
- (e) the CfD Counterparty is unable to resolve an issue in retrieving data from a Metering System;
- (f) data required for a Proving Test cannot be obtained;
- (g) consumption data is flagged with an alarm; and/or
- (h) the Generator requests such a CfD Audit.

### **3.2 Description of tests and checks forming part of CfD Audit**

This paragraph describes the tests and checks that may be carried out by the CfD Counterparty, the Technical Assurance Agent or any other appointed agent, during a CfD Audit. This is not an exhaustive list.

#### **3.2.1 Measurement Transformer specification (where appropriate)**

The Measurement Transformer specification may be checked to ensure it complies with the standards set out in the Private Network Technical System Requirements and is consistent with the information provided by the Generator.

#### **3.2.2 Meter Technical Details**

The Meter Technical Details may be checked to ensure that they conform to those recorded in CfD Settlement Activities systems using information provided by the Generator, including any Measurement Transformer error offsets and commissioning details.

#### **3.2.3 Accuracy**

The overall accuracy of the Metering System is to be determined by the CfD Counterparty, the Technical Assurance Agent or any other appointed agent in accordance with the applicable requirements of the Private Network Technical System Requirements.

#### **3.2.4 Correct Energy Measurement Check**

To verify that the Metering System is recording the correct amount of energy, checks may be carried out to compare the Primary Energy with that being recorded by the Metering System.

The CfD Counterparty, or its appointed agent, shall seek to establish that the results of this check sufficiently verify that the Meter has been proven to be operating correctly.

In the event that none of the above is practicable, the CfD Counterparty will be notified by its appointed agent (if applicable).

### 3.2.5 Consumption Data Comparison Check

The CfD Counterparty, the Technical Assurance Agent or another appointed agent may compare the metered energy data for one half-hour recorded at the time of the CfD Audit with the consumption data held by the Generator for that same half-hour period. If the values differ by more than the tolerances set out in the Private Network Technical System Requirements then the CfD Counterparty or its appointed agent will issue a non-compliance notice. This check may take place on site or off site at the discretion of the CfD Counterparty and either method shall form part of the CfD Audit.

The cumulative Meter Register half-hour advance shall also be used to confirm the findings from the Correct Energy Measurement Check where, if practicable, the readings for that check were taken during that period. The CfD Counterparty or its appointed agent shall use its discretion, taking into account the predictability of the load (or generation), where the readings were not taken during the same half-hour period.

A half-hour reading from the Meter's Outstation shall be downloaded and converted (raw pulses or engineering units) into a kWh half-hour reading.

One Active Energy channel shall be requested by the CfD Counterparty or its appointed agent, unless non-compliance is identified.

### 3.2.6 Compliance with Private Network Technical System Requirements

Checks shall also be carried out to ensure that the Metering System meets the standards required by the Private Network Technical System Requirements.

### 3.2.7 Quality of installation

All points may be checked as specified in the Private Network Technical System Requirements, including (but not limited to):

- (a) labelling of equipment; and
- (b) general standard of installation, i.e. good working practice.

### 3.2.8 Customer's Metering System

- (a) The Generator shall procure that any Onsite Customer possesses and has installed an import Meter which meets or exceeds the standards that would be required of the Generator under this Private Network Metering Operational Framework and the Private Network Technical System Requirements.
- (b) The Generator, or its appointed agent, shall be granted the right to carry out testing to confirm the accuracy of the Onsite Customer's Metering Equipment and shall be granted access to the Onsite Customer's Metering Equipment for this purpose.

- (c) The Generator shall give the Onsite Customer reasonable prior notice of the date, time, place and nature of every test pursuant to paragraph 3.2.8(c), and the Onsite Customer shall have the right to attend such a test.
- (d) If the Onsite Customer has reason to believe that the Onsite Customer's Metering Equipment is not within the applicable limits of accuracy, or otherwise for any reason is incorrectly recording data, the Onsite Customer shall so notify the Generator.
- (e) If the Generator is notified (under paragraph 3.2.8(e)) or otherwise has reason to believe that any Metering Equipment of the Onsite Customer is not performing within the applicable limits of accuracy:
  - (i) the Generator may require the Onsite Customer or the person responsible for the Onsite Customer's Metering Equipment to inspect and then test the accuracy of such Metering Equipment within a reasonable time of, and in any event no later than ten (10) working days after, the Generator giving notification of such requirement pursuant to this paragraph 3.2.8(f), whereupon the Onsite Customer shall carry out such test in the presence of a representative of the Generator; or
  - (ii) the Generator may, giving a minimum of one (1) working day's notice to the relevant Onsite Customer, arrange for the inspection of such Metering Equipment by a person or persons who is/are suitably qualified in the operation of Metering Equipment, and for such person(s) to make such tests as such person(s) shall deem necessary to determine its accuracy, and the Onsite Customer or the person responsible for the Onsite Customer's Metering Equipment shall co-operate with such person(s) in carrying out such tests. Each such person shall be entitled to assume that all required consents have been obtained for the relevant inspection until such time as it is fixed with notice to the contrary. In the event that such person or persons attempt, but are unable, to inspect the relevant Metering Equipment, the Onsite Customer shall ensure that within ten (10) working days of such attempt, such person or persons (or another person or persons qualified in the operation of the Metering Equipment and instructed by the Generator) are provided access to, and are able to inspect, the relevant Metering Equipment.
- (f) The costs of any test referred to in paragraph 3.2.8(f) shall be borne by the Generator (but without prejudice to its right to charge any other person for such service pursuant to another agreement or arrangement).
- (g) The CfD Counterparty shall have the right to inspect and test the Customer Meter and any associated Metering Equipment on the same basis as it is entitled to carry out such inspections and tests on the Generator's Metering Equipment, and the Generator shall procure that the CfD Counterparty or its appointed representative are granted the requisite access within the timeframes required by the CfD Counterparty.
- (h) Any test carried out pursuant to this paragraph 3.2.8 shall comply with the Private Network Technical System Requirements.

### 3.2.9 Queries and appeals

If the Generator wishes to query or appeal the CfD Audit process, it can do so in accordance with the disputes process set out in its Private Network CfD Agreement.

## 3.3 Validation of Meter Data

### 3.3.1 Interrogation

If any of the following faults are identified, the CfD Counterparty shall be entitled (but not obliged) to undertake a full investigation of the Metering Equipment at the Generator's expense:

- (a) where the Outstation is interrogated, or when data is received from the Outstation automatically, and the 'electronic serial number' of the Outstation differs from that expected;
- (b) where the Outstation is interrogated, or when data is received from the Outstation automatically, and the number of channels of the Outstation differs from that expected;
- (c) where the Outstation is interrogated, and the time of the Outstation differs by more than 15 minutes from that expected, and the time; or
- (d) where the Outstation is interrogated, or when data is received from the Outstation automatically, and the individual alarms required by the Private Network Technical System Requirements are flagged.

### 3.3.2 Main/Check comparison

Where the Main Meters and Check Meters are installed in accordance with the Private Network Technical System Requirements, the metering data recorded by each Meter must be compared for each circuit. Allowance shall be made for low load discrepancies. Any discrepancy between the two values in excess of 1.5 times the accuracy requirements prescribed for the individual Meters at full load, as defined in the Private Network Technical System Requirements, shall be investigated by the CfD Counterparty at the expense of the Generator.

### 3.3.3 Reporting

All cases of suspected Metering System faults must be investigated in accordance with paragraph 2.3.2 of Section C of this document and reported to the CfD Counterparty as appropriate.

The original metered value (where obtained) and alarm(s), together with the reason for the changes to that value, must be retained.

## 3.4 Timing of Routine CfD Audit

A Routine CfD Audit shall be conducted in the first quarter of each of the following years during the term of the Generator's CfD Agreement (each date to be calculated by reference to the Generator's Start Date):

- (a) year one (being the year which commences twelve months after the start date in relation to the Generator's Private Network CfD Agreement)
- (b) year four;
- (c) year seven;
- (d) year ten; and
- (e) year thirteen.

## **SECTION C: Meter Operations**

### **1. INTRODUCTION**

#### **1.1 Purpose and scope**

This Section C defines the processes that the Generator must use to carry out the work for meter operations.

It describes the key interfaces and timetables for sending appropriate Metering System data to the CfD Counterparty.

The purpose of this Section is to ensure that meter operations work of the Generator is carried out in an orderly and timely manner.

### **2. METER OPERATION OBLIGATIONS**

#### **2.1 General obligations**

##### **2.1.1 Systems and Processes**

The Generator shall use systems and processes so approved in accordance with the Private Network Technical System Requirements.

The Generator may appoint a third-party to operate its Metering Equipment. If the Generator does appoint such a third-party, it shall notify the CfD Counterparty of the identity of that third-party, and of any change to the identity of the person operating the Metering Equipment from time to time.

Where the Generator has appointed a third-party to operate its Metering Equipment and that third-party ceases to do so at any time and for any reason, the Generator should take on the responsibilities of operating the Metering Equipment until such a time as a replacement third-party operator is found.

#### **2.2 Metering obligations**

##### **2.2.1 Energisation of Meters**

The Generator shall be responsible for energising a Metering System.

##### **2.2.2 Installation, removal and re-programming of Meters**

- (a) The Generator shall maintain records and comply with systems and processes to commission, recommission, remove, replace or reprogram Meters.
- (b) The Generator shall carry out a Proving Test or re-test for the Metering Systems for which it is responsible.



- (c) The Generator shall seal and reseal Metering Equipment in accordance with the Private Network Technical System Requirements.

## **2.3 Identification and Reporting of Faults**

### **2.3.1 Key Meter Technical Details**

- (a) If any of the Key Meter Technical Details are changed, the Generator must request a Proving Test from the CfD Counterparty. The CfD Counterparty shall not be under any obligation to conduct such a Proving Test but may conduct such a test at its own discretion.
- (b) Where any, or all of the relevant details are changed while a Metering System is de-energised, the CfD Counterparty may require the Generator to re-prove the Metering Equipment at the CfD Counterparty's own discretion.

### **2.3.2 Meter fault reporting**

- (a) Upon the Generator being notified by any person or otherwise discovering that any Meter is potentially recording incorrect data, the Generator shall investigate and rectify the problem and notify the CfD Counterparty of the nature of the fault and the date and time at which it was rectified.
- (b) The Generator shall report all such Meter faults to the CfD Counterparty. The Generator shall specify in its report the period covered by the fault and its view as to how to estimate half-hourly generation correctly. The Generator shall separately identify Meter faults affecting data quality and those not affecting data quality.
- (c) The Generator shall record the date on which each fault was reported and the date on which each fault was cleared. For these purposes, a fault affecting data quality shall be treated as cleared when the relevant Metering System once again records in compliance with the Private Network Technical System Requirements.
- (d) When the Generator is notified of or otherwise discovers a fault with the Metering System, it must investigate the fault within two (2) working days. If the Generator employs a third-party agent to operate the Metering Equipment, the Generator must investigate the fault within five (5) working days.
- (e) The Generator shall seek to rectify the fault promptly, and in any event within ten (10) working days of the date on which the fault is discovered by or notified to the Generator.
- (f) If the fault has not been rectified within ten (10) working days, the Generator shall notify the CfD Counterparty immediately with a proposal setting out how the fault is intended to be rectified.
- (g) The CfD Counterparty shall be entitled to attend any investigation of a Meter fault without charge.

### **3. INTERFACE AND TIMETABLE INFORMATION**

#### **3.1 Registration activities**

##### 3.1.1 New connection

- (a) In the event that a Generator installs or replaces the Metering System, it must ensure that it does so in compliance with the Private Network Technical System Requirements applicable to the Facility and the Generator's Private Network CfD Agreement.
- (b) In particular, the Generator must provide an updated electrical schematic to the CfD Counterparty in accordance with the terms of its Private Network CfD Agreement.

##### 3.1.2 Initial installation

The Generator shall and install and commission the new Metering System prior to commencement of CfD payments in accordance with the terms of its Private Network CfD Agreement.

##### 3.1.3 Replacement of Metering Equipment

- (a) If the Metering Equipment needs to be replaced for any reason, the Generator shall install and commission the new Metering Equipment within five (5) working days of the removal of the previous Metering Equipment.
- (b) The Generator should send to the CfD Counterparty written confirmation, including any relevant supporting documents, that it has successfully commissioned the replacement Metering Equipment within two (2) working days of completion of the Meter Commissioning Tests.
- (c) The Generator must prove the Metering System within two (2) working days of sending such confirmation to the CfD Counterparty.

##### 3.1.4 Removal of Metering Equipment

If the Generator cannot replace the Metering Equipment immediately after removal of the previous Metering Equipment the Generator's data shall be estimated in accordance with paragraph 4.1 of this Section C for such a period as is deemed reasonable by the CfD Counterparty until replacement Metering Equipment is installed and tested.

##### 3.1.5 Proving of a Metering System

- (a) In order to ensure that the metering data recorded by the Metering Systems Outstation(s) can be transferred for the CfD Settlement Activities, a Proving Test shall be performed.
- (b) Prior to the commencement of data provision pursuant to its Private Network CfD Agreement, the Generator must perform an initial Proving Test. The CfD Counterparty will employ a Technical Assurance Agent to attend such initial Proving Test. Where

possible this process will take place simultaneously to the commissioning of the Metering System. The CfD Counterparty will retain the right to order a Technical Assurance Agent to be present at any subsequent Proving Test for the duration of the Generator's CfD Agreement.

- (c) The Generator shall undertake the following to perform a Proving Test:
- (i) use a hand-held unit ("HHU") to remotely interrogate the Metering System and confirm that such HHU provides the same metering data (ensuring that the data for the Settlement Period in relation to which the test is carried out does not contain a zero value);
  - (ii) notify the CfD Counterparty of the Meter reads obtained within five (5) working days, showing that it has collected the same reads for main and check metering; and
  - (iii) the CfD Counterparty shall inform the Generator within two (2) working days whether it is satisfied with the results of the Proving Test or whether a retest is required. If a retest is required, it shall be carried out by the Generator within two (2) working days of being notified that it must do so by the CfD Counterparty.
- (d) Alternative methods of proving to that set out in paragraph 3.1.5(c) can be used with the prior agreement of the CfD Counterparty, such agreement not to be unreasonably withheld.

#### **4. ESTIMATES**

- 4.1** The CfD Counterparty may estimate a Generator's data on the basis previously agreed between the CfD Counterparty and the Generator. The Generator may make representations to the CfD Counterparty if it feels the estimation method is inappropriate or otherwise incorrect in accordance with the Private Network Dispute Resolution Procedure.

#### **5. CALIBRATION AND COMMISSIONING**

##### **5.1 Introduction**

- (a) All Meters shall be calibrated for the accuracy stated in the Private Network Technical System Requirements prior to installation. These calibrations must demonstrate conformity with relevant product standards appropriate to the class index of the Meters. Manufacturers' certificates shall be provided which include the actual errors of the Meter across its operating range. Such certificates shall be retained by the Generator for the life of the Meter and shall be made available, on request, to the CfD Counterparty.
- (b) Where it is necessary to apply compensations to Meters, these are to be applied after the Meter has been calibrated and further tests carried out which confirm that the compensation has been correctly applied.

## **5.2 Measurement Transformers**

### **5.2.1 Initial Calibration**

- (a) Measurement Transformers shall be calibrated prior to initial installation. Evidence thereof shall be made available to the CfD Counterparty on request.
- (b) For multi-ratio current transformers and voltage transformers, the transformer shall be calibrated, as a minimum, for the ratio that is to be used for the purposes of the CfD Settlement Activities.
- (c) The calibration is required to demonstrate compliance with BS EN 60044-1, BS EN 60044-2, and/or class index BS EN 60044-3 accuracy and measurement range requirements, as appropriate for the Measurement Transformers.

## **5.3 Commissioning**

- (a) All Metering Equipment must be fully commissioned in accordance with this Private Network Metering Operational Framework prior to the commencement of payments pursuant to the Generator's Private Network CfD Agreement.
- (b) The purpose of commissioning is to ensure that the energy flowing across a Metering Point is accurately recorded by the associated Metering System.
- (c) The CfD Counterparty shall employ an independent Technical Assurance Agent to attend the initial Meter Commissioning Test of a Metering System pursuant to the Generator's Private Network CfD Agreement.
- (d) The Generator shall ensure that they give the CfD Counterparty a minimum of ten (10) working days' notice before undertaking the initial Meter Commissioning Test.
- (e) The CfD Counterparty will retain the right to order a Technical Assurance Agent to be present at any subsequent Meter Commissioning Test for the duration of the Generator's Private Network CfD Agreement.

### **5.3.1 Instruments for commissioning**

The Generator shall establish and maintain a process to periodically calibrate the instruments used for commissioning (from which measurements are recorded). Each instrument shall be traceable. The Generator shall maintain records to show the instruments used for commissioning by the Generator. All instruments for commissioning shall be re-calibrated every two (2) years. If an instrument is found to be outside of the required accuracy limits specified in the Private Network Technical System Requirements, the Generator shall consider what impact that inaccuracy has had on previous Meter Commissioning Tests. If deemed necessary by the Generator or the CfD Counterparty those Metering Systems shall be revisited, a record shall be left of the determination.

### 5.3.2 Sealing

At the completion of commissioning, Metering Equipment shall be sealed in accordance with the requirements in the Private Network Technical System Requirements.

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