Indigo Power Limited

MOCOPA Distribution Business Information

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Contents

1.0 Introduction 3
2.0 General Arrangements 3
3.0 Operational and Safety Matters 4
3.1 Contacts 4
3.2 Distribution Safety 4
3.3 Health and Safety 5
3.4 Competent Persons 6
3.5 Access to Indigo Networks' Distribution Substations 7
3.6 Reporting of Defects, Incidents and Dangerous Occurrences 7
3.7 Damaged and defective equipment 7
3.8 Removal and Replacement of Cut-out Fuses 8
3.9 Operation of Indigo Networks' Service Termination Switchgear/Isolators 9
3.10 Provision of new supplies 9
3.11 Testing of customer electrical installations prior to connection or energisation 10
4.0 Technical 11
4.1 Meter Operator Equipment Attachment 11
4.2 CT/VT 11
4.3 Ferrule Markings 15
4.4 Resealing Meter Equipment 15
4.5 Service Termination Access – Meter Operator Obligations 15
4.6 Communications Links 16
5.0 Commercial 16
5.1 Removed Meters 16
5.2 Charges 17
5.3 Site-Specific Information 17
5.4 Essential Commissioning Information and Certificate of Completion 17
Appendix 1 – Contact Details 17
Urgent issues to report. 17
Non-urgent issues / information to report 18
Non-Urgent problems to report: 18
Other issues to report: 18
Appendix 2 – Known Service Termination/ Metering System Defects 18
Safety related defects on Indigo Networks' service terminal equipment 18

1.0 Introduction

This document provides information for Meter Operators working on Indigo Networks distribution systems, in accordance with the Meter Operators Code of Practice Agreement (MOCOPA)[1]

Indigo is an Independent Distribution Network Operator (IDNO) and holds a distribution licence under the Electricity Act 1989. Meter Point Administration Numbers (MPANs) beginning with the number 38 are Indigo registered MPANs.

In this document, terms have the meaning given to that term in the MOCOPA.

2.0 General Arrangements

All Meter Operators who wish to work on Indigo Networks' distribution systems shall hold a valid registration certificate and must be a signatory to the Meter Operator Code of Practice Agreement before undertaking any works within Indigo Networks' distribution systems.

All Meter Operators must comply with the Balancing and Settlement Code's Metering Codes of Practice. All Meter Operators must ensure that their Meter Operatives are aware, as necessary, of the requirements of all relevant legislation and all relevant Indigo Networks' policies and other documents so as to secure their own safety and the safety of others.

The Meter Operator shall provide a contact name, address and telephone number where a responsible person can be contacted at all reasonable times for the notification of accidents/ incidents and the discussion and resolution of other safety matters.

Meter Operators are required to provide the following information to Indigo Networks in accordance with the Meter Operator Code of Practice prior to commencement of activities within Indigo Networks' distribution systems.

(a) At least 10 working days before commencement of first works:

- Copy of Meter Operator Licence.
- Copies of operatives' Certificates of Competency.
- Copy of Insurance Certificate.
- Safety contact name, address and telephone number.

(b) Within 5 working days of installation of a new meter:

Full commissioning details as specified in the Code of Practice.

[1] https://mocopa.org.uk/

3.0 Operational and Safety Matters

3.1 Contacts

A list of contacts, addresses and telephone numbers for Indigo Networks distribution systems are given in Appendix 1

3.2 Distribution Safety

It is the responsibility of the Meter Operators to ensure that all work on or in the vicinity of electrical equipment undertaken by the Meter Operator is carried out in a safe and competent manner to a level complying with or exceeding the requirements of health & safety and electricity related legislation and, in particular, relevant requirements of the Electricity Act 1989 (as amended), the Utilities Act 2000, Electricity At Work Regulations 1989 (as amended) and the Electricity Safety, Quality and Continuity of Supply Regulations 2002.

It is the responsibility of the Meter Operator to take note of distribution business information provided by Indigo Networks and to circulate all relevant aspects to their operatives including, not exhaustively, such aspects as Indigo Networks' emergency contact phone numbers, equipment risk assessments and notices of equipment defects and notifications of unsafe areas where special access arrangements through Indigo Networks may apply.

Contact details for advisory support, in relation to distribution asset related matters only, are listed in Appendix 1.

Indigo Networks responsibilities as asset owner, having no contractual client relationship with Meter Operators who have separate licensed rights of access in fulfilling electricity supplier activities, are broadly limited to the provision of appropriate safety information relating to distribution equipment in relation to electrical, physical or other risks of which Meter Operators should be aware so as to ensure the safety of their operatives.

As such, Indigo Networks will:

- Provide emergency contact information for reporting of dangerous occurrences and for reporting of defective distribution equipment.
- Provide safety information, defect information and risk assessment information so far as deemed relevant and appropriate to the service termination assets upon which Meter Operators are entitled to work. Relevant Defect Information and Risk Assessment information is contained in Appendix 2 of this document.
- Reserve the right to audit Meter Operator organisations, including management, safety officers, competency appointing officers and meter operatives.
- As asset owner and distribution meter point administrator, Indigo Networks will also:
    - Provide contact information for essential site commissioning information.
    - Provide contact information for return of Indigo Networks' meters (when applicable) from Indigo Networks' distribution systems (please see 5.1).

3.3 Health and Safety

In accordance with the Electricity Safety, Quality and Continuity Regulations 2002, it is Indigo Networks' policy to ensure accidents and dangerous occurrences on relevant network assets are reported to the Health and Safety Executive. Indigo Networks shall report any problems on assets under its control including the cut-out, CT/VTs, associated wiring up to and including the test terminal block, associated metering panel and upstream distribution network.

Indigo Networks shall use the Registration Authority to provide Health and Safety

Bulletins/ Announcements to MOCOPA Operators which require urgent or non-urgent variations to the existing information requirements. Indigo Networks will provide access to such H&S Bulletins & Announcements on the MOCOPA Website and will notify the Registration Authority of such Bulletins & Announcements for onward communication to all MOCOPA Operators.

Should Indigo require the MOP to carry out repair the procedure to log and action requests for service position repairs is as below:

1- appointment of MOP

D155 - We will appoint the MOP to the MPan

D11 - MOP appointment accepted

D148 - Notification of Change

D170 - Request MTDs from previous MOP

D149/150 - MTDs

D151 - De-appoint previous MOP

2- Request Repair

D142 - Request for installation or change to the metering system functionality or removal of meters.

3- Following completion of works

D149/150 - MTD into industry

D303 - Notification of MAP

D302 - Notification of Customer Details

D10 - Meter Reads

D312 - Update Echoes

Requests are sent via the MOP work management system which produces a job card confirming the job details - the customer address and contact details including the location of the meter and any special requirements, the MPAN number and Meter serial number, the hand held requires the engineer to carry out a risk assessment, polarity check and an appliance check before they can proceed with any work, the engineer is also required to take photographs of the existing and new meters following any exchange.

3.4 Competent Persons

Indigo Networks requires that all appointed electricity suppliers, all appointed meter operators and all persons put to work on electrical equipment must be 'Competent Persons'.

UK Legislation states that all persons put to work on electrical equipment must be 'Competent Persons'. The nationally accepted definition related to work control is that:

"No person shall be engaged in any work activity where technical knowledge or experience or supervision is necessary to prevent a danger or where appropriate, injury, unless he possesses such knowledge or experience or is under such supervision as may be appropriate having regard to the nature of the work."

Given the nature of installation being connected, energised or re-energised, operators must ensure that the installation is safe to connect and complies with the British Standard Requirements and the Electricity Supply Quality and Continuity Regulations 2002, as amended.

The Meter Operator has a duty to its employees of ensuring their competence for particular tasks they may be instructed to undertake. As the employing organisation it is the responsibility of the Meter Operator to assess competence of their employees and sub-contractors, including initial and refresher assessments and any other form of validation and supervision that the Meter Operator deems necessary to ensure compliance with legislative requirements.

Indigo Networks has no client responsibility for un-contracted Meter Operator organisations, no responsibility towards training of meter operatives but Indigo Networks will retain the right for assessing competence of meter operatives associated with providing a valid authorisation certificate appropriate to the requirements of each operative.

The Meter Operator's prime client contractual relationship is with the contractually appointing electricity supplier. It is through the existence of a contract with an electricity supplier that a Meter Operator may undertake activities on Indigo Networks' distribution network. The responsibility for assuring competence of meter operatives and subcontractors resides fully with the relevant Meter Operator and with their contracting electricity supplier client.

Subcontracted Meter Operators shall require the same level of authorisation as the principal meter operator but the subcontractor's authorisation will be restricted to work only for the principal meter operator.

Indigo Networks does, however, fully reserve distribution network operator rights to suspend or prohibit any activities of registered Meter Operators and any other parties with legitimate rights/ licence to work upon Indigo Networks 's distribution system equipment and to eject such persons from site in such cases that dangerous activities, unacceptable condition of completed works or evidence of serious deficiency in competence are observed, assessed or reported by, or to, Indigo Networks. The implicated party (parties) will not be allowed to complete any further work on Indigo Networks' distribution systems unless exonerated by a formal inquiry undertaken jointly by Indigo Networks and the Meter Operator and/or following satisfactory further training/retraining and assessment to the satisfaction of Indigo Networks

3.5 Access to Indigo Networks' Distribution Substations

Unsupervised access to Indigo Networks' Distribution Substations by parties not undertaking contracted works on behalf of Indigo Networks will not be granted under any circumstances.

Distribution keys shall not be issued to any party other than for the purposes of allowing a party to conduct distribution network activity being undertaken under contract to Indigo Networks.

Where access is required by the Meter Operator, requests for supervised access should be made to Indigo Networks. The points of contact and telephone numbers are given in Appendix 1.

Where service termination and metering equipment are housed in customer buildings, access should be made by arrangement with the customer, as controller of the premises, and with supervision provided by the customer, as appropriate, according to the nature of their property and their installation. In such cases Indigo Networks will generally not provide supervised access.

3.6 Reporting of Defects, Incidents and Dangerous Occurrences

Any equipment owned by Indigo Networks found to be defective, such as to present the possibility of danger or any part of the site or situations which are, or which might reasonably be, believed may become hazardous should be reported immediately by the Meter Operative. The points of contact and telephone numbers are given in Appendix 1.

A list of known defects on service termination equipment for which the Meter Operator should make their operatives aware is provided in Appendix 2. More specific asset type defects are advised separately via the MOCOPA secretary and the MOCOPA web site:

www.mocopa.org.uk

In addition, it is also a requirement under relevant safety legislation to report accidents and dangerous occurrences to the relevant reporting authority and such accidents and dangerous occurrences that relate to Indigo Networks distribution systems must also be reported to Indigo Networks at the earliest possible opportunity. The points of contact and telephone numbers are given in Appendix 1.

3.7 Damaged and defective equipment

Where Indigo Networks (or its agents) identifies damaged metering equipment at a customer connection to its network, Indigo Networks will report such damage to the relevant Supplier. Where there is a need for damaged Metering Equipment to be replaced, then such Metering Equipment shall not be destroyed or otherwise disposed of without the permission of any relevant party and Indigo Networks will reserve/set aside the original equipment and make available for subsequent investigation.

Indigo Networks will store such equipment for 6-months and will engage with any relevant parties regarding investigation requirements accordingly. Where Indigo Networks finds apparent evidence of deliberate tampering/interference with metering equipment, Indigo Networks and its agents shall comply with the relevant provisions of the Revenue Protection Code of Practice. In potentially dangerous situations, Indigo Networks (or its agents) shall take appropriate action to make the site safe, and seek to avoid damaging any evidence of tampering/interference.

MOCOPA Operators should immediately notify Indigo Networks' operational point of contact (see Appendix 1) of any Distribution Business Equipment which they find to be defective and presents the possibility of danger; or any parts of the Distribution Business Sites or situations which are or which they reasonably believe may become hazardous. Indigo Networks will log all notifications received

from MOCOPA Operators and promptly arrange for repairs to implemented to address such defects or hazards.

Indigo Networks will keep MOCOPA Operators informed in accordance with the Service Level Agreement for Resolving Network Operational Issues as detailed within DCUSA. Indigo Networks will send an appropriate person to the affected Premises within the DCUSA Prescribed Period. If the report is received outside of Working Hours, the report will be deemed to have been received at the commencement of the next period of Working Hours.

Where an appropriate person is unable to attend the affected Premises on behalf of Indigo Networks within the DCUSA Prescribed Period, then (as soon as reasonably practicable after becoming aware that this is the case) Indigo Networks will telephone and inform the MOCOPA Operator when an appropriate person will attend the Premises on Indigo Networks' behalf.

Where Indigo Networks is unable to remedy the situation during the initial visit to the affected Premises, then the defect/hazard will be made safe, and Indigo Networks will:

a) agree an appointment date with the Connected to re-visit the Premises to remedy the residual situation;
b) ensure that the date of such appointment is within the Prescribed Period; and
c) attend the Premises on the agreed appointment date and remedy the residual situation.

Indigo Networks will inform the MOCOPA Operator by telephone or email upon completion of all remedial works undertaken to remove the defects or hazards as originally notified by the MOCOPA Operator as required by Schedule 5, paragraph 3.7 of MOCOPA. Such notifications will be provided according to the requirements of the Service Level Agreement for Resolving Network Operational Issues contained in DCUSA.

3.8 Removal and Replacement of Cut-out Fuses

Where the work to be done on behalf of the appointed electricity supplier, by their registered meter operator, requires the removal and subsequent replacement of the main supply fuses then this may take place without reference to Indigo Networks provided the meter operator is suitably authorised to carry out the task, other than the requirement for any incident or accident to be reported immediately in accordance with Paragraph 3.6 above and for the Meter Operator to reseal all distribution service termination equipment in accordance with the Meter Operators' Code of Practice and relevant codes of practice.

Persons removing or replacing main supply fuses must:

- Be assessed and certified as competent by the Meter Operator;
- Be appointed in writing to carry out this activity at the property concerned on behalf of the Meter Operator on behalf of their appointing supplier;
- Be authorised by Indigo Networks to carry out the task; and
- Be in receipt of formal work instructions from, or arising from, instructions from the property's appointed electricity supplier to undertake activity that necessitates the operation of the main supply fuse.

3.9 Operation of Indigo Networks' Service Termination Switchgear/Isolators

Whilst the majority of Indigo Networks' service terminations are cut-out fused, there are other types of service termination at low voltage, high voltage and extra-high voltage that have switchgear or isolators as the exit point's means of energisation and de energization of the main current carrying electrical circuit to the customer's installation.

Where the meter operator is instructed to conduct works that require the de-energisation or re-energisation of an Indigo Networks service termination, whose isolation device for the main current carrying electrical circuit is a distributor locked switchgear or isolator, the meter operator should refer the request back to their supplier and not proceed with their works. The appointed electricity supplier must arrange for Indigo Networks to effect the de-energisation or energisation of service terminations with these types of isolation equipment.

3.10 Provision of new supplies

Indigo Networks' standard process for customer, supplier and MOCOPA Operator liaison in relation to new supplies is as follows:

- Customer/developer agrees connection offer with Indigo Networks;
- Indigo Networks creates unique MPANs for each service/connection and provides details to customer/developer;
- Customer/developer enters energy supply contract with a Supplier;
- Supplier registers MPAN and appoints MOCOPA Agent for meter installation;
- Indigo Networks (or agent) site attendance to determine service position location and meter cabinet requirements;
- Indigo Networks (or agent) installs and commissions service to premise(s) with meter panel and relevant test terminals for use by MOCOPA Operator;
- MOCOPA Operator installs metering equipment and informs Supplier;
- Supplier instructs MOCOPA Operator or Indigo Networks to energise the connection, dependent on connection voltage; Service energised by MOCOPA Operator or Indigo Networks who then informs Supplier to update Energisation Status of the MPAN within MPAS.
- Liaison with Indigo Networks Principal Engineer will address the following issues:
- Provision of site-specific information including service labelling and all conductor marking conventions;
- Service position and meter cabinet location;
- Service cable and cut-out position;
- Access to relevant fuses/carriers for cut-out, CT and CT/VT metering;
- Access arrangements to Indigo Networks Distribution System equipment;
- Site attendance and commissioning requirements;
- Energisation works; and
- Any general service-related notifications.
- Where metering interface equipment or the meter position is situated in a substation where access is restricted under the relevant Distribution Safety Rules, Indigo Networks will notify the MOCOPA Operator of the preferred option for the MOCOPA Operator to gain access to the relevant substation and to fuses within 5 Business Days following provision of the general information MOCOPA Operator by the Distribution Business.

3.11 Testing of customer electrical installations prior to connection or energisation

Where the work to be done by the Meter Operator, on behalf of the appointed electricity supplier, involves the connection, energisation, or re-energisation of customer's electrical installations the safety of the installation must be assured prior to such connection, energisation, or re-energisation as detailed in F, I, K, L & M of the MOCOPA rules (see Appendix 2).

Under regulation 25 of the Electricity Safety, Quality and Continuity Regulations 2002 (ESQC Regulations), Indigo Networks does not give consent to make or alter connections of customer installations where we have reasonable grounds that the customer's installation does not comply with the British Standard Requirements[2] and the ESQC Regulations themselves.

Accordingly, Indigo Networks requires that all Appointed Electricity Suppliers and all appointed Meter Operators ensure, given the nature of installation being connected, energised or re-energised, that the installation is safe to connect and complies with the British Standard Requirements[2] and the ESQC Regulations.

Where the Meter Operator is fitting an isolating switch and customer accessible PME terminal block on the installation side of the metering system, to enable a third party to later connect wires into the fitted isolator and customer accessible PME terminal block, these items form part of the electrical installation.

Accordingly, Indigo Networks requires that the Meter Operator shall conduct such tests as are necessary and sufficient to ensure that the fitted isolator switch and customer accessible PME terminal block is safe to connect and complies with the British Standard Requirements and the ESQC Regulations. The Meter Operator shall retain records of such tests and results.

For the avoidance of doubt, where customers' installations at the time of requested connection comprise a very limited extent of electrical lines and plant that has been demonstrated through tests and certificates to comply with British Standard Requirements[2], then connection of the electrical installation should be made. For example, where a customer's initial installation comprises a double pole isolator with meter tails ready for connection to a metering system and a customer earth block with conductor ready for connection to a PME terminal and the customer's installation complies with British Standard Requirements then connection should not be refused.

Following the Meter Operator's connection of a customer's electrical installation demonstrated to be compliant with the ESQC Regulations the liability for subsequent modifications to the customer's installation resides fully with the customer. It is the customer's responsibility to liaise with their appointed electricity supplier and electricity distribution company if they plan to make changes to their electrical installation which are likely to affect, or exceed, the customer's previously agreed requirements of the distribution system or metering equipment. They must liaise with the relevant parties before any such material changes to their electrical installation are made.

2. British Standard Requirements means the British Standard Requirements for Electrical Installation BS 7671:
[2008 IEE Wiring Regulations 17th Edition (ISBN 978-0-86341-844-0)] as incorporated in the Electricity Safety, Quality and Continuity Regulations 2002 by the Electrical Safety, Quality and Continuity (Amendment) Regulations 2009 (SI 2009/639)

4.0 Technical

4.1 Meter Operator Equipment Attachment

The Meter Operator's meters and associated equipment must not obstruct or restrict access to Indigo Networks' distribution equipment, or be attached to it without the prior written agreement of Indigo Networks.

The Meter Operator's meters must not be fixed upon Indigo Networks' equipment or property, such as metering panels, without the prior written agreement of Indigo Networks. For the avoidance of doubt 'meter boards' are the property of the occupier and, unless ownership is declared by Indigo Networks, no permission would be required from Indigo Networks for the appointed Meter Operator to fit meters upon the meter board. The occupier provides meter boards with the intent to house both distribution and metering assets and consent is implicitly given for the fitting of such assets as a precondition of enabling a supply of electricity to be provided.

It is the responsibility of individual Meter Operators and/or their contractors, to satisfy themselves as to the wiring arrangements at any particular location, to ascertain the nature of the connections at the site and act accordingly. Indigo Networks does not accept any liability whatsoever for independent Meter Operators' actions on site and the Meter Operator and/ or their contractors must bear entire responsibility in all respects.

4.2 CT/VT

Indigo Networks will comply with Schedule 5 of the MOCOPA guidelines as below;

Where Indigo Networks provides an earth terminal for the Customer, it is Indigo Networks' policy for an earth terminal to be accessible to the Customer or contractor, or to take responsibility for making the earth connection. Indigo Networks will ensure that the Customer has ongoing access to the earth terminal in order to carry out routine tests of the installation.

The normal MOCOPA Operator interface point with Indigo Networks' Distribution System for CT and CT/VT metering, will be the outgoing connections from the test/isolating facilities and associated voltage fuses. Indigo Networks will provide test/isolating facilities to enable operations to be undertaken via a safe electrical connection and without the need to disturb any wiring.

Indigo Networks (or its appointed agents) shall agree with the Customer (or developer) the position and space for the Metering Equipment, and shall, in so much as it is within its reasonable control, ensure it remains reserved. This location will be accessible to the Customer so they can read their meter and to the MOCOPA Operator (via the Customer). Indigo Networks' service termination equipment and the Metering Equipment shall be located between 0.5 and 1.8m above finished floor level, subject to unavoidable constraints such as security, vandalism, or fire risk mitigation.

Interface test/isolating facilities for HV and LV CT metered supplies, will be installed in an accessible position near to the location of the Metering Equipment and with labels to be attached in accordance with A2.3 of Appendix 2 of MOCOPA. CT and VT secondary circuits shall be connected to earth on Indigo Networks' side of the interface.

For whole current supplies, a means of isolating voltage supplies (e.g. cut-out) shall be installed in an area to which the MOCOPA Operator has access.

Indigo Networks (or its appointed agents) will provide access to fuse carriers and fuses for cut-out-controlled supplies. Where these cannot be left on site (e.g. risk of unlawful energisation), Indigo Networks will ensure the MOCOPA Operator has access the required fuses/carriers in a timely and acceptable manner to energise the connection.

Indigo Networks (or its appointed agents) shall determine the rating of cut-out fuses. For whole current metered supplies, the Meter Operative shall check the conductors being provided by the Customer are suitably rated for the cut-out fuses provided before he connects them or energises the supply.

Indigo Networks (or its appointed agents) will be responsible for commissioning the service, e.g. checking voltage, earth loop impedance, phase rotation, polarity, and any protection settings etc at the cut-out/switchgear.

For HV and LV CT-metered supplies, before connecting Customer conductors, or facilitating the Customer's contractor safe access to suitable terminals, Indigo Networks (or its appointed agents) shall check the conductors being provided by the Customer are suitably rated for the cut-out fuse or circuit breaker protection.

For circuit breaker-controlled LV and HV metered supplies, Indigo Networks (or its appointed agents) shall Energise the supply, in response to a request from the Supplier. New connections shall not be energised until the connection is appropriately metered. This policy also applies to Indigo Networks' agents and MOCOPA Operators.

Indigo Networks and its appointed agents shall adopt the conductor colouring and marking conventions as described in Schedule 5, Appendix 11 of MOCOPA.

Operational Liaison

For the purpose of operational, safety technical and escalation liaison, Indigo Networks shall nominate one or more representatives to offer a "point of contact" with the MOCOPA Operator and shall notify the MOCOPA Operator as part of the provision of Distribution Business information see **Table 1.**

The point of contact shall have responsibility for agreeing with the MOCOPA Operator an appropriate course of action for the situations where there is a need for Indigo Networks attendance, if for example:

a) lack of the Site-specific information described in Table 1
b) access problems,
c) where the meter is CT or CT/VT-operated and there are no test/isolating facilities and/or the CT or VT secondary circuits are not connected to earth on the Distribution Business side of the test/isolating facilities; or
d) where work needs to be carried out in the vicinity of live, bare conductors which cannot be adequately screened.

Provision of Information

If a MOCOPA Operator requires Indigo Networks to provide Site-specific information, it shall give the Indigo Networks as much prior notice as is reasonably practicable.

Upon receipt of a request from a MOCOPA Operator appointed at a specific Site, Indigo Networks shall provide to the MOCOPA Operator the Site-specific information shown in **Table 2.**

Where Indigo Networks does not have relevant CT and VT details they shall notify the MOCOPA Operator of this fact and instead provide it with appropriate standard errors. It shall also advise the MOCOPA Operator where it is aware of the existing Metering Equipment being the subject of a dispute as regards meter readings or accuracy and is or may be subject to an investigation by the National Measurement and Regulation Office, such investigation precluding its removal pending such determination.

When Indigo Networks installs new Metering Equipment or changes existing Metering Equipment it shall provide or update, as appropriate, the information on the HV/LV CT Metering Label described in **Table 3**. In addition, Indigo Networks will adhere to the requirements outlined in the Settlement Agreement Code of Practice 4.

Indigo Networks shall provide to all MOCOPA Operators the information indicated in Table 1. This information shall be provided on the MOCOPA Website. This may be achieved by providing a link to the appropriate page of the Indigo Network website.

Table 1 - MOCOPA Operator Information

Contact name(s) and detail(s) for operational, safety, technical, commercial and escalation liaison.

OPERATIONAL/SAFETY

- Contact details for:
    - New supply liaison;
    - Pre-modified HV and LV CT supply liaison; and
    - Post modified HV and LV CT supply liaison.

TECHNICAL

- Contact details for MOCOPA Operator Metering Equipment calibration and commission test records.

COMMERCIAL

- Contact details for:
    - Dangerous situation (category A) Distribution Business Site attendance liaison;
    - Asset condition reporting queries; and
    - Data flow queries.

ESCALATION

- Contact details for general escalation issues.

Table 2 -Site Specific Information

Upon request from a MOCOPA Operator the following Site-specific information shall be provided by Indigo Networks either electronically using data flow D0215, or by email to:

indigopower@indigopipelines.co.uk.

CT and VT test certificates will also be emailed if they are available.

Data Item Name	Data Item Reference
CT Class	J0505
CT Rating	J0506
CT Ratio	J0454
Meter Equipment/Service Location	J1025
MPAN Core	J0003
Number of Phases	J0427
Supply Capacity	J0456
Supply Capacity	J0443
VT Class	J0677
VT Rating	J0678
VT Ratio	J0455

Table 3 - HV/LV CT Metering Label

Voltage/Current Transformer Information							
VT/CT	**PHASE**	**Manufacturer**	**Serial Number**	**Single/ Dual/ multi–Ratios Available**	**Rating VA**	**Class**	**Ration Connected**
VT	L1	Sadtem	01-114274	Single	50	0.5	11,000/110
VT	L2	-	-	--	-	-	-
VT	L3	Sadtem	01-114275	Single	50	0.5	11,000/110
CT	L1	Alstom	01/8166500	Low Ratio of 200/100/5	10	0.5s	100/5
CT	L2	-	-	-	-	-	-
CT	L3	Alstom	01/8166501	Low Ratio of 200/100/5	10	0.5s	100/5
Indigo Networks			Installation / Commissioning Engineer B Smith				Date

As stated above upon request from a MOCOPA Operator the information in Table 2 shall be provided by Indigo Networks either electronically using data flow D0215, or by email to:

indigopower@indigopipelines.co.uk

CT and VT test certificates will also be emailed if they are available.

Table 3 above enables Indigo Networks to provide relevant information to MOCOPA Operator associated with VT and CT metered installations. It will be adhered to the inside of the metering cabinet door or placed adjacent to the Test Terminal Block (TTB) at the meter position, the former being the preferred option for security i.e. to avoid unauthorised tampering/removal or fading of the information due to a combination of direct light/time.

It will be used for both HV and LV CT connections and in most circumstances negate the need of the MOCOPA Operator, BSC Technical Assurance Agent and other parties to obtain the information directly from equipment nameplates etc., which are often inaccessible with the connection Energised. The label format accommodates single and multi-phase LV and HV systems.

This label will be completed by Indigo Networks VT/CT installation/commissioning engineer either, preferably using pre-formatted computer/labelling software or, handwritten using an indelible pen. The label will be completed and fixed before energisation for any new or modified metering installation.

4.3 Ferrule Markings

Indigo Networks' appointed agents will adopt the Energy Networks Association Technical Specification 50-19 standard ferruling marking at the Distribution System interface (test terminal block and/or fuses/link) for all new and altered wiring.

At Indigo Networks' Distribution System terminations, the markings shall be as follows:

Markings	**Details**
CTs	D11, D10, D31, D51, D50 (odd is "feed") *Note: Where a common return is used, then D10, D30 & D50 will become D70*
Metering Potentials	E10 or E11, E30 or E31, E50 or E51 *Note: Metering potential ferrule markings will depend upon whether the interface is a fuse/link or a test terminal block after the fuse.*

Indigo Networks will issue CT & VT test certificates to MOCOPA Operators where these are available, upon request.

4.4 Resealing Meter Equipment

Indigo Networks will re-seal Metering Equipment after it has removed MOCOPA Operator seals in order to carry out any work upon Metering Equipment, including where it carries out post-commissioning testing. Such resealing may be undertaken only by its appointed agents. It will be the appointed agent's responsibility to manage the sealing equipment.

4.5 Service Termination Access – Meter Operator Obligations

The Meter Operator shall not allow, nor do anything so as to allow any third-party access to the distributor's equipment, including, not exhaustively, service fuse cut-outs, service isolator switches,

multi-way service distribution panels and any associated distribution service termination equipment and conductors.

Where the Meter Operator is fitting an isolating switch on the installation side of the metering system, whereby a third party may connect wires into the fitted isolator, the Meter Operator shall ensure that all appropriate arrangements are made, including fitting a customer accessible PME terminal block to the distributor's neutral terminal, such that the third party can perform all his work without touching the distributor's equipment. The Meter Operator will have responsibility for any such occurrence unless the supplier has otherwise accepted it. Where the Meter Operator fits customer accessible isolating switches, or customer accessible PME terminal blocks, he shall leave a clear safety notice or label with the equipment describing the state in which it has been left.

4.6 Communications Links

Any equipment which is required to be installed by the Meter Operator for communications must be installed in a proper manner and not obstruct or restrict access to Indigo Networks' equipment or the customer's installation.

Under no circumstances shall Indigo Networks' equipment or communications links, if present, be disconnected without permission. Any resultant costs incurred by Indigo Networks from such unauthorised disconnections will be charged to the party responsible for the disconnection.

Under no circumstances shall Indigo Networks' communication links be utilised by a Meter Operator without prior written agreement of Indigo Networks.

In all circumstances, where an existing communication link is not owned by Indigo Networks, the Meter Operator should gain prior written agreement from the owner if utilisation of that communications link is desired.

Where a radio/wireless communication system needs to be fitted to a substation, the position is to be agreed with the owner of the substation prior to installation. The fitting of radio/wireless communication systems and associated cabling must be carried out with care to ensure that it does not impair the building structure or weatherproofing or proper functioning of existing distribution equipment or metering equipment in any way whatsoever

5.0 Commercial

5.1 Removed Meters

In the event that Indigo Networks inherits any historical meters which require removal any of Indigo Networks' meters or other equipment removed from site shall be returned within 30 days of its removal.

Removed meters/equipment shall be transported in a way that avoids interference or damage and can be returned to the address given in Appendix 1. Meter Operators should contact Indigo Networks by telephone before making arrangements to return any meters/equipment.

The meters/equipment should be clearly marked with the name and address of the site from which they were removed. Returned meters should be accompanied by a listing of the serial numbers so returned, preferably in electronic format (MS Excel).

PROVISION OF INFORMATION

The Meter Operator shall send all relevant data flows in accordance with the MRA End to End diagrams within 10 working days. All data flow within Indigo Networks is coordinated through C&C (our third-party service provider).

Wherever one of Indigo Networks' meters is installed or removed, or if the Supplier or Meter Operator at a premises containing one of Indigo Networks' meters changes, the Meter Operator shall inform Indigo Networks (as MAP) using the relevant Data Flows, including the D0303. Wherever the Meter Operator fits a meter at a premises, the Meter Operator shall send the relevant Data Flows to Indigo Networks' (as distributor), including the D0304.

5.2 Charges

Where the Meter Operator requires a member of Indigo Networks staff to attend site a charge may be levied. A minimum charge shall be made for all site visits.

5.3 Site-Specific Information

Site-specific information will be provided only where the request for information is received by Data Flow D0170. The information will be provided using Data Flow D0215.

Reporting of technical or condition issues associated with Distribution Network Operators' equipment shall follow the information provided within the current edition of the MOCOPA Guidance for Service Termination Issue Reporting. This Guide is intended to support meter operatives in making a correct diagnosis, give direction on the actions meter operatives should take, and help meter operatives to determine the most appropriate asset condition code for reporting purposes.

5.4 Essential Commissioning Information and Certificate of Completion

This information should be sent to the address given in Appendix 1 within 5 working days after completion of any metering installation.

Appendix 1 – Contact Details

Urgent issues to report.

Reporting of defects, hazards or other operational and safety problems that are inherently dangerous and require immediate rectification specifically for safety reasons – e.g. **category A codes** within the 'MOCOPA Guidance for Service Termination Issue Reporting'[3] .

Where the problem's urgency requires, an immediate phone call should be made to:

Emergency Number 105

Where supplementary information such as mobile phone camera photographs need to be communicated the email to be used should be agreed during the phone call.

[3] https://mocopa.org.uk/documents/

Non-urgent issues / information to report

Category B and C codes within the 'MOCOPA Guidance for Service Termination Issue Reporting' - situations in which the issue prevents the metering work being carried out or is service termination equipment information. These should be reported using the standard D0135 dataflow.

Non-Urgent problems to report:

- Reporting of Operational Problems that are not inherently dangerous but result in inability of Meter Operator to carry out a Meter Operator activity.
- Requesting supervised access to distribution operational property/building which houses metering equipment.
- Requesting supervised access to shared customer / distribution areas which houses metering equipment to undertake metering works where independent customer access arrangements do not exist.

Where the problem is not immediately urgent all reports should be reported as a 'category 'B' or 'C' D0135 flow as the nature of the problem requires, and when time allows. Where supplementary information such as mobile phone camera photographs need to be communicated the email address below is to be used;

Telephone: 0203 9555140 (working hours 09:00 – 17:00)



Other issues to report:

For any other issues to report and escalation of issues please contact:

Megan Goss – Head of Regulation and Compliance, Indigo Networks Limited

Appendix 2 – Known Service Termination/ Metering System Defects

Safety related defects on Indigo Networks' service terminal equipment

These notes are to assist Meter Operators to identify defects associated with Indigo Networks' service terminal equipment.

Below are some examples of cut-out and service cable defects that MUST be reported. This list is not extensive and any defect that may put the public, operator's staff or equipment at risk, whether listed in this Appendix 2 or not, MUST be reported. Urgent faults should be reported as soon as reasonably possible.

Some **examples** of defects

- Reverse Polarity at the cut-out (i.e. Phase Voltage with respect to ground on the neutral terminal of the cut-out)
- High Earth Loop Impedance
- Hot service cable or cut-out (or any signs of overheating or burning)
- A report from a customer that they are experience flickering lights.
- Loose connection(s) (which may or may not be caused by working on/moving any part of the service or metering equipment)
- Damaged cut-out
- Exposed service cable conductors
- Fuse holder jammed in cut-out
- Rewireable fuse type cut-out (all sizes)
- Link or any type of fuse in cut-out neutral
- Leaking bitumen from cut-out

Report to: Indigo Networks in accordance with Appendix 1