

Guidance Note on Independent District Network Operators (IDNOs)



The HEA - Formerly ASLEC – the Association of Signals, Lighting and other highway Electrical Contractors – and HEMSA – the Highway Electrical Manufacturers and Suppliers Association

Guidance Note For Highway Electrical Installations Connected to Licensed Electricity Distribution Network Operators

Introduction

Independent Distribution Networks Operators (IDNO's) have been granted electricity licenses to own, operate and maintain electricity networks across the UK. OFGEM recognise that all stakeholders in the industry must be fully aware of the existence of IDNOs and how they have the same obligations as DNOs. To this end this document has been produced by IDNOs, originally for OFGEM's Electricity Connections Steering Group (ECSG).

The purpose of the document is to provide guidance to consultants, developers and local authorities in dealing with electricity services to developments supplied from an IDNO network.

What is the difference between an IDNO and a DNO?

There are 14 Distribution Network Operators (DNOs) in the UK currently owned by seven different groups. DNOs came into existence on 1 October 2001, evolving from ex-Public Electricity Suppliers. These companies have distribution services areas corresponding to the areas in which they were formally the incumbent Public Electricity Supplier. Within these areas they have certain licence obligations. IDNOs do not have distribution services areas but can operate across the whole of the UK. An Independent Distribution Network Operator (IDNO) is any electricity distributor whose licences were granted after 1 October 2001.

Why are there IDNOs?

Changes to the Electricity Act 1989 by the Utilities Act 2000 introduced distribution as a separate activity requiring authorisation. OFGEM are responsible for granting licences authorising a person to distribute electricity for the purpose of giving a supply to any premises (a distribution licence), to any company fulfilling OFGEM's criteria. IDNOs own and operate electricity distribution networks which are predominately network extensions connected to the existing DNO distribution network, e.g. to serve new housing developments.

How many IDNOs are there?

Currently OFGEM have issued six distribution licences to IDNOs (for the latest information, refer to the OFGEM web-site):

- ESP Electricity Ltd (formerly known as Laing O'Rourke Energy Ltd)
- Independent Power Networks Ltd
- Energetics Electricity Ltd
- The Electricity Network Company Ltd
- ECG (Distribution) Ltd
- EDF Energy (IDNO) Ltd
- An Application from UK Utilities (Electricity) Ltd is currently being considered.
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Background

Competition in electricity industry has brought changes to the way that electricity supply, connections and diversions are managed. Competition allows the customer to procure services from the open market using service providers other than the traditional electricity companies that were in existence before competition was introduced. Competition now exists for the following areas:-

- Competition in electricity Supply
- Competition in Connections & Diversions
- Competition in Distribution, and
- Competition in Metering

Competition in distribution has allowed new companies known as Independent Distribution Network Operators (IDNO's) to obtain an electricity distribution license. This allows them to construct, own, operate and maintain their own distribution networks as an alternative to the incumbent Distribution Network Operators (DNO's).

DNO's own, operate and maintain their networks regionally within its Distribution Services Area (DSA), whereas IDNO's can build and operate their networks across the UK.

It is important to recognise that IDNO networks are licensed networks and not 'private networks' and are therefore subject to the same regulations as those governing the DNO's networks. Both DNO's and IDNO's are regulated by Ofgem.

DNO networks are large interconnected networks, whereas IDNO networks tend to be smaller networks connected from a single point of connection supplied from the DNO. Effectively, from the end users perspective, the terms DNO and IDNO are one and the same.

Legislation

Unmetered supply tariffs are available for connections, which are suitably designated as being as an unmetered supply.

The Electricity (Unmetered Supply) Regulations 2001 (SI No. 3263) defines conditions under which a supply of electricity may be given other than through an appropriate meter.

“an unmetered supply may be given where—

(a) the electrical load is of a predictable nature, and

(b) either—

(i) the electrical load is less than 500W; or

(ii) it is not practical for a supply of electricity to be given through an appropriate meter at the premises due to—

(a) the anticipated metering costs in the particular case being significantly higher than the usual metering costs associated with that size of electrical load;

(b) technical difficulties associated with providing such a meter in the particular case; or

(c) operation of law so as to prohibit or make excessively difficult the provision of such a meter in the particular case.

Supplies where consumption is dependent on some factor such as temperature, for example, or where the load could be easily increased without a structured method of informing the DNO would not normally be allowed to be connected without an approved meter.

Unmetered connection offers are conditional on the end user providing and maintaining an accurate and auditable inventory of connected load.

For example, unmetered connections often consist of:-

- Street lighting
- Traffic signals
- Traffic signs
- CCTV
- Advertising hoardings
- Communications cabinets
- Bus shelters
- Telephone kiosks
- Parking Meters

Unmetered supplies are registered and managed in accordance with Balancing and Settlement Code (BSC) Procedure BSCP520 — "Unmetered Supplies Registered in SMRS" and administered by ELEXON¹.

Consultation

It is important for the consultant or developer to consult with the local authority engineer and the adopting authority advising that the unmetered supply connections will be fed from an IDNO network.

Any questions, technical queries and advice needed can be addressed at the design stage and before the site works commence.

Highway Electrical Equipment and Connections Design

Early exchange of information can help to reduce delays, variations and hence costs.

Highway Electrical designs – e.g. street lighting designs - should be approved by the adopting authority and information exchanged between the developer, adopting authority and the distribution network operator that will provide the electricity connections.

Where possible the design of street lighting installations should be included with the developer's plot layout. Electricity mains can be designed and routed in such a way that the positioning of the street lighting columns can be optimised to reduce costs at the outset.

The street lighting design should comply with the adopting authority's specifications.

¹ <http://www.elexon.co.uk/participating/unmeteredSupplies.aspx>

Connection Arrangements

Street lighting connections will normally be via single connections to each column or where specified by the local authority, a single point of connection will be provided to a control pillar.

IDNO's will tend to work at a national level across the UK and therefore there will be a requirement to maintain a consistent connection arrangement for each point of supply.

IDNO's will utilise 'Waveform' CNE mains cables with a CNE service cable terminated into a street lighting cut-out offering a PME earth terminal where possible. In general, IDNO looped services to bollards will not be permitted. Looped services may only take the form of a private sub-service from a secondary fused isolator above the IDNO cut-out.

Secondary isolation should be provided above the distribution network operator's cut-out and the owner of the street lighting equipment may wish to specify an isolation device of a higher specification than an IDNO/ DNO cut out.

The IDNO/DNO will terminate the cable into the IDNO/DNO cut-out and energise the short tails to the column by the insertion of a fuse into the cut-out after completing the necessary insulation resistance, polarity and earth loop impedance checks, but will leave the fuse withdrawn from the secondary isolation device.

Where a competent person is on site and can provide certificates of satisfactory tests then the columns can be energised by that competent person.

Street Lighting Inventory

Details of the street lighting equipment are supplied by the developer with the street lighting connections application.

Details of the street lighting equipment should be submitted to the IDNO to establish the UMS certificate by either the developer, or directly by the Local Authority (LA).

The Local Authority will need to include the adopted street lighting equipment in their inventory system. In the LA inventory system it will need to be clearly identified as connected to the IDNO system. This is possibly the most onerous issue for the LA. This will enable the LA to contact the correct IDNO or DNO to report faults (e.g. loss of supply or damage).

The LA will need to submit a separate detailed inventory of equipment to the Unmetered Supplies Operator (UMSO) of each IDNO and DNO operating in the LA area at the frequency agreed in the respective connection agreements. The format of the detailed inventory would be as defined in section 4 of the Unmetered Supplies Operational Information document produced by Elexon²

The format is common for DNOs & IDNOs.

² <http://www.elexon.co.uk/participating/unmeteredSupplies.aspx>)

Unmetered Supply Operator (UMSO)

Each UMSO will prepare a summary of that inventory and send it to the LA's Meter Administrator who calculates the half hourly consumptions for a LA who has chosen to purchase their energy on a half hourly basis. The Meter Administrator will have to run separate equivalent meters for each DNO/IDNO network.

Metering Point Administration Number (MPAN) ³

The distribution network operator provides a Meter Point Administration Number (MPAN) which represents a reference point for billing purposes. There will be a different MPAN issued to each local authority for each distribution network operator.

The LA will need to forward each MPAN to their chosen electricity supplier for registration and they will receive separate bills for each MPAN.

The Energy Supplier

The developer or local authority cannot buy its energy from the distribution network operator. The developer or local authority can continue to purchase energy independently in the competitive market and use the distribution network operator to transport that energy. A supplier must be nominated before a connection is made. The Developer or LA's nominated supplier would bill the customer as normal.

Section 38 Agreements should not discriminate between an encumbent host DNO and an IDNO.

The Meter Administrator

The Meter Administrator (MA) can remain the same, the only change is that there is an alternative name to the encumbent DNO on the inventory cross referenced to a different MPAN. The appropriate approach will depend on the commercial arrangement between the LA and their MA. If the consumption in the IDNO service area is small it may be more administratively and cost effective to trade the MPAN on a non-half hourly basis.

If the IDNO connected equipment is traded on a half hourly basis, then the PECU Array already in use for the DNO service area will be available.

DUoS Charges

Distribution Use Of System (DUoS) charges are published in the individual IDNO/DNO DUoS Charging Statement which are approved by OFGEM. DUoS charges are charged to the supplier and remain unchanged between the DNO and embedded IDNO network.

³ MPAN can also be referred to as Metering System Identifier (MSID) for unmetered suppliers

Comparison of key activities for street lighting installations connected to DNO & IDNO networks

	Street Lighting Installation Connected to a DNO Network	Street Lighting Installation Connected to IDNO Network
Unmetered Supply Operator (UMSO)	DNO	IDNO
New Connection Provider	DNO	IDNO
Street Lighting Inventory Issued to	DNO	IDNO
UMS Certificate Provider	DNO	IDNO
Meter Point Identification Number (MPAN) issued by	DNO	IDNO
Connection Maintenance/ 24-Hour Emergency Response	DNO	IDNO
Diversionsary Works & Disconnections	DNO	IDNO
Contact Details	DNO Published Telephone Numbers	IDNO Published Telephone Numbers
Minimum Performance Standards	As per OFGEM Model SLA (or Better)	As per OFGEM Model SLA (or Better)
DUoS Charge	As Per DNO Charging Statement	As Per IDNO Charging Statement
TUoS Charge	As Per DNO Charging Statement	Unchanged
Supplier	Freedom Of Choice	Freedom Of Choice
Meter Administrator	Freedom Of Choice	Freedom Of Choice
Equivalent Meter / PECU Array (for Half Hourly Supplies)	As provided by Meter Administrator	As provided by Meter Administrator

Service Level Agreements

OFGEM has published a Model Service Level Agreement in an open letter dated 19th October 2007 — "Unmetered Service Level Agreement (SLA) — Decision on Key Performance Indicators."

The DNO and IDNO should be following the voluntary standards set out in this publication and may endeavour to improve upon the standards quoted therein (See Appendix 1).

Published contact numbers are available to the LA's and the developers to provide a point of contact during normal working hours and also for 24 hour emergency cover.

Unmetered Supplies Certificate produced by the IDNO/DNO are issued to the developer/LA for their use and issue to the Supplier.

It should be noted that service level agreements are currently under review as part of the development of DPCR 5, which is due to be implemented in 2010, – for the latest information, reference should be made to the OFGEM web-site.

Emergency Response

IDNO's have a duty to respond to emergencies, provide maintenance services and to provide new connections/disconnections whilst recovering its reasonable charges in doing so.

Appendix 1

Standard 1: Fault Repairs

Emergency Response	Work necessary to remove immediate danger to the public or property arising from the electricity distribution network.	80% in 2 hours
High Priority Fault Repair	Work that is urgent but would not require attendance out of normal working hours to restore electricity supplies to street furniture e.g. at the site of an accident black spot, major road junction, pedestrian crossing facility, an area of public order concerns, a reoccurring fault or traffic signals. This category is to be used sparingly and reviewed on a monthly basis.	50% in 1 day 90% in 10 days
Multiple Unit Fault Repair	Fault on service, for example, no current, low voltage, faulty cut-out (i.e. electrically distressed), loss of neutral and high earth impedance affecting more than one unit.	75% in 10 days 90% in 20 days
Single Unit Fault Repair	Fault on service, for example no current, low voltage, faulty cut-out (i.e. electrically distressed), loss of neutral and high earth impedance affecting one unit.	60% in 10 days 80% in 20 days

Standard 2: New Works

New Works 1—10 Jobs	May include the following; new capital lighting schemes, road improvement schemes, provision of connection/disconnections, service transfer, new service and disconnections.	60% in 15 days 90% in 30 days
New Works 11— 50 Jobs	May include the following; new capital lighting schemes, road improvement schemes, provision of connection/disconnections, service transfer, new service and disconnections.	70% in 25 days 90% in 35 days

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