



# Conditions for connection to the Distribution System

***Applying to:***

- *Import Customer Connections of Capacity of less than 100 kVA.*

Status: Approved by CER on 2<sup>nd</sup> May 2007

## 1 Introduction

The organisation that supplies electricity to you under a supply contract does not provide the connection between the electricity distribution system and your premises if we are responsible for that connection in our role as Distribution System Operator ('DSO'). This schedule sets out the conditions you must meet for us to provide the connection.

## 2 Application for the connection

- a You should apply to us for a new connection to our distribution system or for changes to an existing connection. The standard procedure is explained in the 'Guide to the Process for Connection to the Distribution System', which is available on our web site [www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks).
- b We will tell you the cheapest technically-acceptable connection method that is suitable for you, depending on how much electricity you will need and in line with the distribution system security and planning standards.
- c We will send you a quotation letter or connection agreement setting out the connection offer, including the nature of the connection and the Maximum Import Capacity and Maximum Export Capacity.
- d Our metering arrangements will be in line with the Distribution Code. For low voltage (LV) customers, these requirements are explained in the customer interface document, which is available on our web site [www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks). You may not extend your connection for anyone else to use who we would consider to be a separate customer.
- e We will try to provide the connection in line with your wishes, but cannot guarantee to provide the connection within a specific time because the time needed to complete the relevant work will be affected by many factors, not all of which are within our control.

## 3 Conditions

- a You must accept our conditions that are identified in the quotation letter, including the requirements that:
  - you have paid any charges, or other money you owe us; and
  - the substation site has been transferred and the sub-station has been built (if required).
- b You must have got the consent needed under condition 7 and entered into a supply agreement (as confirmed by the Meter Registration Service ('MRS')).
- c You must have got certifications as required under condition 6 below.

## 4 Type of connection

- a The Distribution Code sets out the standards applying to the Distribution System. A brief extract from the code is given below. Please refer to the Distribution Code for more details (this is available on our web site [www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks)).

### Summary of the Distribution Code requirements

	Nominal Distribution System voltages (all at 50 hertz)	Operating voltage range (volts)		Earthing and neutral treatment	Minimum short circuit ratings (kilo amp)
		High	Low		
Low voltage (LV)	230 volts -phase to neutral	253	207	In line with the national rules for electrical installations	9 (Domestic)
	400 volts-phase to phase	440	360	In line with the national rules for electrical installations	37 (Business)
Medium voltage (MV)	10,000 volts (10 kilovolts)	11,100	See note 1 below	Isolated neutral (see note 2)	12.5 (see note 3)
	20,000 volts (20 kilovolts)	22,100	See note 1 below	Earthed through 20 ohm resistor – limits fault current to 500 amps	12.5 (see note 3)
High voltage (HV)	38,000 volts (38 kilovolts)	43,000	See note 1 below	Earthed through arc suppression coil at source 110kilovolt Station	12.5 (see note 3)
	110,000 volts (110 kilovolts)	120,000	See note 1 below	Effectively earthed	26 (see note 4)

- 1: Variable according to operating conditions. You can get information on particular locations if you ask us.  
 2: Except in parts of Dublin and Cork City – please ask us for more details.  
 3: 20 kA in parts of Dublin and Cork City – please ask us for more details.  
 4: 31.5kA in the Dublin area– please ask us for more details.

## 5 Capacity of the connection network

We design our networks and each connection on the basis of a specific Maximum Import Capacity (MIC) for each connection.

- a You must not import or export electricity through the connection point above the Maximum Import Capacity or the Maximum Export Capacity without our permission, in writing. If you import or export electricity above the relevant maximum, we will be entitled to charge you a financial penalty related to how much you have gone over the limit.
- b If we are aware that you have gone over the limit, we will treat it as an application for a new or changed capacity in line with condition 1.

- c The maximum level of electricity demand is defined as the measured average demand in any 10-minute period. For the purpose of a, we work it out from either:
  - the metered maximum demand; or
  - if the maximum demand is not metered, the demand worked out from the metered yearly use using a standard load factor as approved by the Commission for Energy Regulation from time to time. A standard load factor is a ratio used to estimate the maximum demand at the connection point from the amount used each year.
- d Where there is no agreed Maximum Import Capacity, we will work it out as the highest level of demand in the previous three years, (as in c above).
- e You must give us notice, in writing, of any proposed addition of disturbing load or generating equipment.

## 6 Your installation

- a Once you have accepted the connection offer, you must arrange to have your installation carried out in line with the offer.
- b How effective and safe use of electricity is depends on the electrical installation in your premises as well as on the type of the connection delivered from our system. You should take appropriate steps to make sure that your installations and equipment are suitable for that connection, and to protect yourself from interruptions and variations in voltage. You will be responsible for any damage to equipment that cannot work properly within the levels of voltage disturbances shown in the Distribution Code.
- c You must choose and use equipment that does not cause the voltage or frequency regulation of the Distribution System or the electricity supply to be outside the standards set out in the Distribution Code (DCC4.3) If it does have that effect, or we believe it could do in the future, you must pay to put the situation right within a reasonable time of us giving you notice. If you do not do this, we will disconnect the electricity until the situation has been put right.
- d In the interests of safety and good practice, your electrical installation including earthing, bonding and protection, must meet the relevant standards approved by the Electro-Technical Council of Ireland (ETCI). If your earth installation is connected to our neutral system, you are responsible for any problems which arise because your installation does not meet ETCI standards.
- e Under ETCI rules, every installation, including alterations and extensions, must be inspected and tested before they are used. We will not test your installations. You are responsible for the suitability and safety of the installation.
- f If we have to connect an installation or a new circuit within an installation, we will need to see a completion certificate signed by either a contractor who is registered with a regulatory body recognised by us or the Commission for Energy Regulation, or an inspector for one of these bodies, for:
  - new installations;
  - existing installations that have been altered so that the electrical quantities recorded on a completion certificate may have changed, for example, moving a meter with extended meter tails; and
  - installations that have been disconnected for six months or more.
- g For medium- or high-voltage connections, or where generators are connected, you must meet the requirements of the documents listed in the annexe of the Distribution Code.

- h If we provide the connection over more than one phase, you must make sure that the load is balanced as evenly as possible between the phases at all times.

## 7 Meters

- a Except in cases where there is a special agreement, the amount of electricity supplied to any customer will be measured by a meter or meters and other equipment we have supplied and installed. The meter or other equipment will belong to us at all times.
- b Our staff, agents or contractors will read the meters.
- c Only people authorised by us will fix, connect, remove or work on any meter, main fusebox, seal, electric line or other equipment that belongs to us.
- d If you or a supplier asks, we will test the accuracy of the meter to find out if it is within the range given in the Metering Code. If it is outside this range, we will tell the MRS and the supplier so the customer's account can be increased or reduced as necessary. Otherwise, the recording of meters and other equipment will be final and we may charge you the cost of the test.
- e If electricity is supplied for any period before a meter is connected, any equipment is found to have been connected to a wrong meter **or** a meter has failed to record correctly the electricity used, we will tell the MRS and the supplier who may adjust your account as necessary. If you become aware of any failure you must tell the supplier or us immediately in writing.
- f If there is any unauthorised interference which leads to electricity being used that hasn't been properly metered, we will tell the MRS and supplier who may adjust your account as necessary.

## 8 Rights over land and access conditions

- a You must get, at your cost and expense, all the consents that we need to install, operate, repair, maintain, inspect and remove our equipment on any land or in any buildings which you own or control. Any consent must be granted under conditions which are reasonably acceptable to us.
- b If we need to carry out work in relation to your connection, you must provide reasonable line or cable routes and ground conditions, and must not place any unreasonable restrictions on us in relation to working hours or other constraints. You must not allow anyone else to restrict our work either.
- c You must allow our employees, subcontractors and agents immediate access with no notice, both during the agreement and after the agreement has ended, to enter your premises to:
  - carry out connection or modification work;
  - operate or read meters;
  - inspect or test the metering equipment;
  - work on our equipment or the facility;
  - disconnect the connection point; or
  - meet our responsibilities under the agreement.

You must give us safe and unobstructed access. All rights of access for us under the agreement will include the right to use vehicles, equipment, machinery and materials that are necessary to carry out the functions for which the right of access is granted. When we are on your premises, we will do all we can to co-operate with you and to follow all your reasonable instructions in relation to safety and security.

## **9 Your liability for interference with or damage to our property**

You are responsible for looking after all our meters, main fuse boxes, seals, electric lines and other equipment placed on your premises or under your control. You will be liable for the cost of repairing any damage for which you are responsible. Charges for the electricity that is estimated to have been used but not recorded will be treated as in condition 7e above.

## **10 Our liability**

We accept liability for injuries to people and damage to property which are caused by our negligence or for which we are liable by law. Our liability for damage is limited to that which is directly caused by our negligence and does not extend to any special, indirect or consequential damages or losses such as, but not limited to, loss of revenue, loss of profit, loss of use, loss of production, loss of power, the cost of capital, the cost of replacement power and the costs connected with any interruptions.

## **11 Our right to disconnect the connection point**

We may disconnect the system at any time if we feel it is necessary in line with good industry practice. In particular we may disconnect the system in any of the following circumstances.

- a We are asked to do so by the supplier or under the conditions of the Trading and Settlement Code.
- b You are no longer registered to a licensed electricity supplier.
- c You have broken any of these conditions or the Distribution Code.
- d We are allowed to do so under the conditions of the agreement or the Distribution Code (including, without limitation, for demand control purposes).
- e We are allowed to do so by law.
- f We need to inspect, alter, test, maintain, repair, replace, remove or add to any part of, or make new connections to, the distribution system.
- g We consider it necessary to avoid danger to people or damage to property.
- h We need to restore supplies to other customers connected to the distribution system.
- i You ask us to, in writing, as long as you have paid us any reasonable costs involved in disconnecting and, if necessary, reconnecting the electricity.

If any of conditions 11d, 11e or 11f applies, we will give you notice in line with the customer service code, which you can get from us if you ask.

If condition c applies, we will give you two working days' notice that we are going to disconnect the electricity, unless the delay would mean that we have broken any legal or regulatory obligation, in which case we may disconnect the electricity immediately and without notice.

In all other cases listed above, we have the right to disconnect the system.

## **12 Distribution code**

You must follow the Distribution Code and the documents detailed in the annexe of the Distribution Code.

If there is any inconsistency between the quotation letter and the general conditions or the Distribution Code, the relevant terms of the General Conditions or the Distribution Code, as appropriate, will apply, unless our payment rights are involved in which case the quotation letter will apply.