



Unit 7

Connections, Quality of Supply & Safety

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Registered charity number 279057
VAT number 726 0202 76
Company limited by guarantee
Registered number 1436945 England

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Revision History

Release Date	Revision Number	Summary of Changes
17/01/11	V1.0	Re-formatted and Re-branded
24/05/2012	V3.0	Reviewed, legal amendments and re-formatted
07/12/16	V5.0	Reviewed, legal amendments, re-branded and re-formatted

Reviewed by

This document (or component parts) has been reviewed by the following:

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Unit 7

Connections, quality of supply and safety

Introduction

Consumers who are not on the gas and / or electricity networks may make a request to be connected. Electricity distributors (often referred to as DNO) and gas transporters (often referred to as GT) have a duty to connect premises to their network in certain circumstances. They may also receive requests from consumers for alterations to be made to existing connections.

DNO and GT should ensure that consumers have a reliable supply of gas and electricity and that if their supply is interrupted, it is restored without delay where possible. The guaranteed standards ensure that in certain circumstances where these standards are not met payments are made to consumers.

The safety of the network is of key importance for both gas and electricity, and this is reflected by the fact that SLC(G&E)6 requires that there is a telephone service that is available 24 hours a day 7 days a week, to enable the reporting of safety issues and the receipt of information and advice on safety matters.

The stages of the consumer's journey addressed in this unit are as indicated below:



The following issues will be discussed further in this unit:

Section 1: New connections and alterations

Section 2: Quality of supply, disruptions and excavations

Section 3: Safety

We will now look at each of these areas in turn.

SLC

The licence conditions that are referred to in this unit are the licence conditions that refer to gas transporters and electricity distributors unless indicated otherwise.

Section 1

New connections and alterations

Consumers who require new connections are likely to be those who have properties that do not have a mains supply and therefore they want to connect the property to the national network. Alternatively, new connections may be required when new properties are built. Consumers may need to arrange to re-connect the supply if the supply has previously been discontinued. They would not generally have to pay for the reconnection of the premises except where a gas supply that has been capped for over 12 months, in which case a new connection would be needed. If a meter has been removed it may also be necessary to pay for a replacement meter.

Sometimes consumers will want to make alterations to their existing connections. This is often the case when the layout of their property is going to change or if an alteration is necessary for safety purposes.

In this section we will look at the following areas:

- Entitlement to a connection
- Procedures for obtaining a new connection
- Charges for new connections
- Alterations to supply connections
- Issues with connections and alterations

Entitlement to a connection

The obligation to connect premises up to the network is placed on the DNO and the GT in accordance with the EA and GA. The obligation to connect may arise following a request from an owner or occupier of the premises or where electricity is concerned, this could be from an authorised supplier acting with the consent of the owner / occupier. GT only have a duty to connect if the premises are within 23 meters of the nearest gas main or if it could be connected to it by a pipe supplied and laid by the owner of the premises.

The GT or DNO may be exempt from this duty to connect in certain circumstances including (amongst others):

- ✓ the consumer is outside of a GT / DNO authorised area

- ✓ the gas supply might endanger the public or supplying electricity might be unsafe

- ✓ it is not reasonable to connect in all of the circumstances

Note that in some cases, the consumer may have a problem getting a connection because the supplier refuses to supply them. This could happen for numerous reasons including (amongst others):

- ✓ the consumer will not agree to pay a security deposit

- ✓ the consumer will not pay to have a PPM installed

- ✓ supplying the consumer with energy might endanger the public

- ✓ if the supplier provided a supply to the consumer, it may adversely affect the supply to other consumers

- ✓ consumers who previously had a connection may be refused a supply or reconnection by the supplier for reasons relating to outstanding debts. This will be discussed in unit 8 'Debt and disconnection'

Procedures for obtaining a new connection

The legal requirements for getting a connection are set out in the GA and EA. Here we will set out the practical procedure that takes place when a consumer requires a connection. The general procedure for obtaining a connection will be the same whether the consumer is applying for a gas or an electricity connection.

(a) Request a connection

The consumer must contact either a supplier or the DNO for that particular area to request a connection in the case of electricity, or GT in the case of gas. This may often be done over the telephone, over the internet or making a written request by letter or using an appropriate application form. It is advisable that any verbal communications are confirmed in writing. If the consumer applies via a supplier they should be made aware that the supplier might charge a fee for arranging the connection. The following essential information will usually be required from the consumer:

- ✓ the location of the premises and the intended use, for example domestic use

- ✓ the desired date for the commencement of the supply

- ✓ the maximum power required if known (it is probably sufficient to make it clear that the supply will be for ordinary domestic use)

- ✓ whether the connection is temporary or permanent and if it is temporary how long the supply will be needed

(b) Choose a supplier

If the consumer contacts the DNO or GT directly, they must then choose a supplier. Consumers should do this in good time before they want the energy to be physically connected to their premises in order to avoid unnecessary delays.

The DNO or GT will assess the cost of the connection and provide a written quotation (see 1.3 below). Note that some work may be carried out by a third party contractor – see contestable and non-contestable work below.

(c) Accept the quotation

The consumer accepts the quotation (payment is usually required in full when the quote is accepted) and then enters into a 'Connection Agreement'. This is a contract that will include a number of standard terms and conditions.

(d) Install a meter

The connection takes place. The supplier will usually arrange for a meter to be installed at the property. Once the connection has been made tests will be carried out to ensure that it is safe.

Consumers should be aware that the time that it takes to get connected will depend upon the circumstances. In some cases the supplier may need to close a road to make the connection or may have to gain access to neighbouring properties. If this is the case the process will be delayed as the DNO will need to obtain the relevant consents (see 1.4 below for a further discussion regarding delays).

Practical tip

Cables and wires from the consumer's meter to electrical appliances are not covered by the connection agreement with the DNO. A qualified electrician should be used to install them. Similarly, consumer protection equipment such as fuse boxes and switches are also not covered by the connection agreement. The same applies to pipe work inside a consumer's property from the meter to gas appliances which are not covered by the connection agreement and these works must be carried out by a Gas Safe registered engineer.

If the price charged is more than the original quote the consumer may be able to claim that the business is in breach of contract. They may struggle to claim if the quote includes a term explaining that the price may vary or that the extra charges represent extra work. However, in relation to such charges, they could argue that these charges should be reasonable under CRA.

Charges for new connections

Consumers will be charged when a new connection is carried out. The GT or DNO is entitled to charge for expenses reasonably incurred in providing the connection. The consumer will need to request a quote for the intended works. The quote will generally include the route of any pipes / cables and estimated timescales as well as the actual costs involved and may set out the terms for payment. It may include terms

permitting a variation of the price to reflect the actual costs of the connection but it is likely to refer to any matter that may significantly vary the costs.

A quote is likely to be treated as an offer to do the work. If the consumer accepts the quote then it is likely that a legally binding contract is in place. Here we will consider who can carry out the work and in the case of DNO and GT, when quotations should be provided and how these charges are calculated.

Practical tip

Some consumers may be entitled to receive assistance with the costs of obtaining a connection and / or meter installation from the social fund. The social fund is discussed in more detail in unit 8 'Debt and disconnection'. Consumers who want to know if they are entitled to apply should contact the DWP (search 'dwp' on gov.uk) or their local Citizens Advice.

(a) Contestable and non-contestable work

Some parts of a connection can only be carried out by the GT or DNO but other elements can be carried out by a third party contractor. For these purposes, work in relation to gas and electricity is split into contestable and non-contestable work. The DNO and GT have their own individual definitions of contestable and non-contestable work but they broadly cover the same activities.

- **Contestable**

This is the work that can be completed either by a third party connection provider, the gas GT or the electricity DNO. This may include installation of the connection infrastructure (for example, preparation of the site by digging or filling in trenches and providing equipment). Third party contractors that are able to carry out this work are referred to as **utility infrastructure providers** and details of contractors who can be used can be found on the Lloyds Register (www.lloydsregister.co.uk) by following the link to either the Gas Installers Registration Scheme or the National Electricity Registration Scheme. Note that there are some elements of work (referred to as **civils**) that can actually be done by the consumer or their own contractor.

- **Non-contestable**

This is work that can only be carried out by a DNO or a GT. This may include (amongst other activities) planning the connection, inspecting the work and the final testing of the supply to the property.

- **Construction and adoption agreements**

When the consumer uses a third party to carry out contestable work the consumer and / or the third party is likely to be required to enter into a Construction and adoption agreement with the DNO or GT. This is a legal document that contains all the relevant requirements for the construction and adoption of the contestable work. The DNO or GT is likely to specify certain standards and requirements for the work and it is likely that any works carried out will be subject to their approval and inspection.

Practical tips

It may be cheaper for the consumer to have elements of the work carried out by a third party. When requesting a quote from the GT or DNO the consumer should request the following:

- ✓ that the work is split into contestable and non-contestable works (if they have already received a quote they could ask for it to be broken down)
- ✓ clarification of what elements (if any) of the contestable works could be carried out by the consumer or their own contractor and which parts need to be completed by a third party connection provider listed on Lloyds register
- ✓ clarification as to which parts (if any) of the works carried out by third parties need to be to be agreed with and approved by the GT or DNO

The consumer should then obtain quotes from the providers on the Lloyds register and independent contractors where appropriate and compare them with the quote provided from the GT or DNO via the supplier to see if it would work out cheaper to get the work done independently. The consumer should check the quotes / estimates to see if they have an expiry date.

(b) Quotations for electricity connections

Electricity (Connection Standards of Performance) Regulations 2010

These Regulations contain provisions not only in relation to quotations but also in relation to 'budget estimates'. A **budget estimate** is a written statement which may be provided without carrying out a site visit or system studies, of the amount that the DNO reasonably estimates it would require the consumer to pay in respect of a connection. Such an estimate is not an offer to do the work and is not legally binding. A **quotation** is a notice stating the extent to which proposals are acceptable and specifying: any counter

proposals, any payment required, any other terms the consumer will be required to accept and any security that the consumer will be required to give.

The Regulations also refer to low volume (LV) demand connections, high volume demand connections and extra high volume demand connections but domestic premises should generally only require a single low volume demand connection. The other types of demand will be discussed when discussing business consumers. A LV **demand** connection is a connection where the highest voltage of the assets involved in providing such a connection and any associated works does not exceed 1,000 volts.

The following standards only apply where the consumer has provided all relevant information that could reasonably be expected to be within their knowledge to the DNO and that the DNO has received payment for the provision of the estimate or quotation where applicable:

Connections reference	Standard	Further details in
CS(E)4	Budget estimate	Annex 3
CS(E)5	Quotation for a single LV connection	Annex 3

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Connection standards are referenced in the following way:

CS = connection standard

1 = the regulation number for the standard

E = electricity

(c) Quotations for gas connections

The GT will usually bear the costs of installing the first ten meters of pipe laid to connect the premises and the consumer then bears the costs from that point forward. The guaranteed standards that apply to gas quotes (referred to as cost estimates) depend upon whether the quote is a **standard quote**, which does not require a site visit, or a **non-standard quote** requiring a visit and also the power that will be required. In addition they depend upon the rate flow that will be required for the connection. The relevant standards are set out in the table below but they will not apply where the information provided by the consumer was incorrect or incomplete, or where consents from third parties are required:

GS reference	Standard	Further details in
GS(G)10(T)	Providing a standard quote	Annex 4
GS(G)10(T)	Providing a non-standard quote	Annex 4

It may be very expensive for consumers who are not on the gas network to obtain a new connection when they are in remote locations that are a significant distance from any gas mains. Some communities arrange for a number of properties to be installed at the same time and divide the costs between all of the properties. This is referred to as a **'gas infill site'**. The supplier is permitted to charge a limited amount of extra money for the fuel to recover some of their costs of the installation.

(d) Connection charging methodology and accuracy schemes

There are requirements in place to ensure that prices charged by DNO and GT are transparent and to provide the consumer with redress if the quote provided is inaccurate. The requirements for GT and DNO to have connection charging methodologies, charging statements and accuracy schemes help to achieve this.

- **Connection charging methodology and charging statements**

A 'charging methodology' explains the principles and methods used in order to determine charges. The standard charges are communicated to the consumers in a 'charging statement'. These documents have to be approved by Ofgem and published by the GT / DNO. If the DNO or GT has a website then these documents must appear on that website SLC(G)4B & SLC(E)13.

The consumer's quotation may actually be less than the figures stated in the charging document. This could be because the DNO or GT has spare capacity in their plant or equipment or they have used equipment that has been removed that can be used in the new connection. The quote may be more than the prices stated in the standard charges if extra work is involved. For example, it will be necessary to reinforce the network because the current network could not bear the load of a new connection, road closures may be necessary or the work required by the consumer would involve significant variations to any standard design proposals.

- **Accuracy schemes**

DNO and GT must have accuracy schemes enabling consumers to challenge the accuracy of quotations issued. If they are found to be inaccurate the charges to the consumer must be adjusted. The customer should then be sent an accurate quote. These schemes must be approved by Ofgem. In the case of inaccurate quotations the following guaranteed standards will apply:

Connections / GS reference	Standard	Further details in
CS(E)7	Accuracy of quotations	Annex 3
GS(G)10(T)	Provide an accurate quote	Annex 4

- **Disputes**

If the consumer is not happy with the quote that they have received they should initially complain to the DNO or GT. If the matter is still outstanding after eight weeks or the situation is in deadlock, the consumer can take their complaint to the Energy Ombudsman (see unit 9 'Complaint resolution and consumer organisations' for further details). If the dispute is not settled then the complaint may ultimately be referred to Ofgem for them to make a determination on the matter (see unit 9 'Complaint resolution and consumer organisations' for further details). The quotation can be disputed after the work has been completed but Ofgem can only determine disputes up to 12 months after the connection has been completed. Ofgem can make a determination in relation to the reasonableness of connection and alteration charges and the correct application of charging methodology.

Example

Mrs Davies was charged £4500 for a new electricity connection that has recently been completed. On reflection she feels that this charge may have been excessive and wants to know if the price is reasonable. She has already written to the DNO and received a response from them stating that her quote was provided in accordance with their standard procedures.

Advice

Mrs Davies should request a copy of the DNO 'connection charging methodology and charging statement' or obtain them online. Explain that these have been approved by Ofgem. She should check her quote against these documents. If the quote appears to be inaccurate she should contact the DNO and make a claim in accordance with their quotation accuracy scheme. She should ensure that she follows the relevant procedure and send her claim form by WRDKC / COP. She should keep a copy of the claim form and any other correspondence for her own records. She should be encouraged to call back if the matter is not resolved.

(e) Quotes from third parties

Consumers may sometimes struggle to obtain quotes for connections from third parties. This is because some will not carry out individual property connections as the work would not be profitable for them. Some third parties are only willing to carry out connections on larger sites, for example, new build developments. Quotes from third parties are not covered by the guaranteed standards, connection standards or the SLC and as a result consumers may struggle to make any challenge as to how the charges have been calculated. If the prices have not been agreed in advance, those charges must be reasonable in accordance with CRA.

Example

Louise had instructed a third party to carry out some work for her without obtaining a quote beforehand. Louise is happy with the standard of work, but the third party has issued a much higher bill than Louise had anticipated.

Advice

Louise's request for advice should be handled in accordance with RAST protocols.

(f) Security payments

Consumers who request new connections may find that the DNO or GT requests a security payment from them as a condition of them being connected to the network (EA and GA). This is a lump sum payment that they must make, usually in advance of the connection. The amount that they can charge is not prescribed but it must be a 'reasonable amount'. The DNO or GT may refuse to continue with the connection until the security is paid.

Alterations to the supply

There are a number of situations where consumers may need to make alterations to their existing supply. It is quite common for consumers to request that their gas and / or electricity meter be moved when they are having work carried out to their property such as the installation of extensions and new driveways. Alternatively, they may have to move the meter because the current location is unsafe or they may wish to replace a credit meter with a pre-payment meter or vice versa. Requests for meter moves should be made to the supplier. Meter moves are considered in more detail in unit 5 'Charging for fuel'. Consumers may wish also to re-route pipes and cables. It may be that other alterations need to be made for safety reasons, for example, an extension has been built over an existing gas pipe.

The practical procedure for getting alterations will be very similar to the procedure for getting a new connection. The consumer should contact the GT or DNO and request a quote in accordance with the guidance provided above and consider engaging third party contractors to reduce costs where possible.

In the case of alterations, the guaranteed standards and connection standards discussed above in relation to obtaining quotes also apply to alterations, as well as charging methodologies, charging statements and accuracy schemes.

Issues with alterations and connections

We have already addressed some problems that may arise with connections and alterations such as disputes over quotations in terms of the initial figure that is provided and further increases to the quoted figure. Here we will discuss some of the other problems that may arise.

a) Quality of workmanship

An agreement to carry out a connection or an alteration is a contract for services. The written agreement may include terms relating to sub-standard workmanship. However, the consumer will have rights under the CRA if the supplier has not carried out the work with reasonable care and skill. Alternatively, they may be able to make a claim using the law of negligence if there is no contract in place because a duty of care is owed.

If the consumer is not happy with the work and that has been done they should complain to the company using the complaints procedure. In the case of work provided by a GT or DNO, if the complaint is still outstanding after eight weeks or is in deadlock, the consumer can go to the Energy Ombudsman (see unit 9 'Complaint resolution and consumer organisations' for further detail about the Ombudsman).

(b) Design

On occasion, the consumer may have an issue with the design of the connection or alteration plans. They may query the reasonableness of the proposed methods or routes used, although often, the consumer disputes these as a means of disputing the costs when they feel that cheaper alternative routes and methods may be available. Ofgem may consider the reasonableness of the routes and methods used when they are considering a dispute in relation to connection charges. In other cases the consumer could perhaps argue that the contractor is not carrying out the service with reasonable care and skill under CRA, if more appropriate routes are available.

(c) Delays

The consumer may have accepted the quote but be experiencing delays in actually having the work completed. Delays may be experienced for a number of reasons, for example, the GT or DNO is waiting to receive relevant consents from a neighbour or the local authority.

The principles that apply to contracts were discussed in unit 2 'Contract law'. The date agreed for completion of the work may be a term of the contract. Remember that if such a term of the contract is broken the remedy available to the consumer will depend upon whether 'time is of the essence' in the contract (a major term) in which case they could end the contract and claim damages or if not they can only claim damages. In practice, most consumers would not want to treat the contract as being at an end as this would mean that they would have to find someone else to do the work and this may be very difficult or impossible in some circumstances. Therefore, the most practical solution may be to request damages for the delay and to make time of the essence. The consumer should check the terms and conditions to see if they make reference to delays.

The guaranteed standards set out time scales for providing dates to consumers in some circumstances and levels of payments that should be made where the GT / DNO does not meet these standards. In any civil dispute a court would be likely to consider these standards when determining appropriate levels of compensation. Now let's look at the standards that may apply.

Practical tip

Calls from consumers requiring advice concerning quality of workmanship, design or delays should be handled in accordance RAST protocols.

Gas

The guaranteed standards make provision for the issuing of planned commencement dates and for completion of the work. These standards will not apply where the consumer has asked the GT to delay the work:

GS reference	Standard	Further details in:
GS(G)10(T)	Provide commencement and completion dates	Annex 4
GS(G)10(T)	Meet completion date	Annex 4

Electricity

The Electricity (Connections Standards of Performance) Regulations 2010 have been in place since 1 October 2010. They include standards in relation to the scheduling and completion of works once quotes have been accepted as noted below. These standards apply provided that:

- ✓ any relevant payments have been made at the appropriate time

- ✓ any security has been provided

- ✓ the consumer has provided written acceptance of additional terms

- ✓ the consumer has provided contact details which can be used between the hours of 9am and 5pm on a working day in respect of the quote

Connections reference	Standard	Further details in
CS(E)8	Contact customer to agree schedule of dates for completion of the work	Annex 3
CS(E)8	Completion of works within the agreed dates	Annex 3

Example

Bill obtained and accepted a quote from his DNO to re-route some of the gas pipes under his kitchen. He signed a connection agreement and this stated that the work would be completed by a certain date. This date passed two weeks ago but the work is still ongoing. Bill is not happy about this.

Advice

Bill should check the terms and conditions of his contract to see if they make provision for delays. It would be necessary to check the value of the contract, as Bill may be entitled to payments under the guaranteed standards but how much he should be paid depends upon the value of the contract. It may be the case that he is unable to claim a payment because one of the exemptions applies. Bill should contact the supplier by WRDKC / COP in accordance with their complaints procedure and confirm his complaint in writing. He should state in his letter that he is 'making time of the essence for completion of the work' and impose a reasonable timescale. Bill should be encouraged to call back if the matter is not resolved.

(d) Change of mind

The consumer may change their mind and no longer wish to go ahead with the work. Depending on the circumstances in which the contract was made, the consumer may have a right to cancel the agreement under legislation such as CCRs (see unit 4 'Energy supply contracts' for further detail). Alternatively, many connection agreements include the right to terminate the contract in the terms and conditions. The consumer would need to check how to cancel and the charges that they may have to pay in the terms and conditions. It is likely that the consumer would have to give written notice and that they would be required to pay for any work done plus administration fees. Any terms in the contract would be subject to CRA.

**Practical tip**

If a consumer feels that the express term(s) of the contract are unfair, or restrict their rights, they should be advised to write to their supplier to challenge the enforceability of the term(s).

Summary

- Consumers moving into premises that do not already have a mains supply, or those building / developing their own properties may require a new connection. A new gas connection may also be required where the previous supply has been discontinued for 12 months or more.
- DNO have a duty to connect premises to an electricity supply following a request from the owner or occupier. GT have a duty to connect following a request provided that the premises are within 23 meters of the nearest gas main or that the premises could be connected by a pipe that is supplied and laid by the owner of the premises.
- Consumers who need connections should contact the DNO / GT to request one and then choose a supplier. If the consumer is happy with the quote they may agree to it and then enter into a connection agreement. When requesting quotes, the consumer should request that it be broken down into contestable works that can be provided only by the GT / DNO and non-contestable works that can be carried out by a third party. If a third party is used it is likely that their work will have to be approved and tested by the GT / DNO and that they will be required to sign a Construction and Adoption agreement.
- The guaranteed standards set out when quotes / estimates should be provided and payments that should be made if these timescales are not met in certain circumstances. There are various exemptions to the guaranteed standards.
- The Electricity (Connections Standards of Performance) Regulations 2010 came into effect on 1 October 2010 and provide for guaranteed standards for electricity connections and alterations.
- GT and DNO are required to have and publish the following documents: connection charging methodology; charging statements and accuracy schemes so that their charges are clear and consumers can check their quotes and estimates against these documents for accuracy. Disputes regarding charges may be directed to the Energy Ombudsman if they are not resolved after complaining to the GT / DNO in accordance with their complaints procedures but could ultimately be referred to Ofgem for a determination.
- Alterations may be requested by the consumer, such as moving gas pipes or meters. The procedure to follow in order to achieve this is very similar to that for getting a connection and the same standards apply in terms of time limits for providing quotes, contacting the consumer to provide for planned dates and completing the work.
- The engineer carrying out the work may be in breach of CRA, or the law of negligence if the work is substandard. Alternatively, the consumer may not be satisfied with the design and planned route of the

connection or alteration. This is often considered by Ofgem as part of disputes that arise in relation to charges for connections and alterations.

- The work may take longer to complete than planned. The guaranteed standards provide for payments to be made in certain circumstances when delays have occurred. The consumer may need to check the terms and conditions of the connections agreement to see if this covers delays and it may be advisable for them to 'make time of the essence' in the contract.

Applicable guaranteed / connection standards

GS/ connection reference	Standard	Further details in:
CS(E)4	Budget estimate	Annex 3
CS(E)5	Quotation for a single lv connection	Annex 3
CS(E)5	Quotation for a small LV project	Annex 3
GS(G)10(T)	Providing a standard quote	Annex 2
GS(G)10(T)	Providing a non-standard quote	Annex 2
CS(E)7	Accuracy of quotations	Annex 3
GS(G)10(T)	Provide an accurate quote	Annex 4
GS(G)10(T)	Provide commencement and completion dates	Annex 4
GS(G)10(T)	Meet completion date	Annex 4
CS(E)8,	Contact customer to agree schedule of dates for completion of the work	Annex 3
CS(E)8	Completion of works within the agreed dates	Annex 3

Section 2

Quality of supply, disruptions and excavations

Consumers may experience problems with the energy that is supplied to their property. They may experience unusual levels of electricity supply due to power surges or low or high voltage levels or other problems resulting from crossed wires. In some cases their gas pressure may be lower or higher than usual. These issues may cause damage to the consumer's appliances, installations or other property. DNO and GT may have to access the consumer's property and carry out excavation work in order to maintain their plant and equipment.

This section will focus on the protection offered by the industry. However, it is important to remember that the consumer may be able to make a claim under contract law as explained in unit 2 'Contract law' and unit 4 'Energy supply contracts'. Express terms of the contract may include terms relating to these issues. Alternatively or additionally, the consumer may be able to claim that the supplier, DNO or GT has failed to provide the service with reasonable care and skill in accordance with the CRA. However, the GT / DNO may be able to argue that they are not liable if the problem was caused by an 'act of God'.

Another possibility is that consumers may be able to make a claim using the law of negligence where appropriate. Remember that those responsible may attempt to limit their liability in the terms and conditions of the contract that they have with the consumer. Any such limitations would be subject to the CRA where appropriate.

Any court considering such a claim is likely to take the protection provided by the industry into account. However, it may be particularly useful where there are gaps in the protection offered by the industry.

Practical tip

If the consumer has suffered personal injuries they should be directed to CLA so that they can receive specialist advice.

In this section we will look at the following areas:

- Quality of supply
- Disruptions
- Excavations and other maintenance

Quality of supply

(a) Voltage issues

Electricity consumers may experience problems with their appliances and other electrical installations due to the voltage supply to their property being different from the norm. The normal voltage supplied to a property is 230 volts. As voltage is not kept constant, it will be within tolerance if it is between 216.2 – 253 volts. Power surges and other situations may cause the voltage to vary. These are discussed below.

- **Power surges**

Power surges are electrical power disturbances and a surge occurs when there has been a rise in the electric voltage or current being supplied to the property over a very short period of time. Surges occur fairly frequently and low level surges should not generally affect most modern electrical equipment which is made to withstand such surges. However, if the voltage occurs above the appliance's normal operating voltage this can cause damage to the appliance or equipment. This is because the surge generates heat, which in turn damages circuit boards and other electrical components. Repeated small power surges may slowly damage or shorten the life of appliances. Power surges may occur in a number of situations including when the electricity supply is switched back on by the network after a disruption or lightning.

It is advisable for householders to use 'surge protection' for particularly sensitive appliances such as televisions and computers. Surge protection sockets and other devices can be purchased from most DIY stores and other retailers.

The consumer may, in some circumstances, be able to claim from the DNO for damage to their property resulting from a power surge. This is only possible if the DNO is at fault in that the surge is the result of poor quality supply or the result of the power being disrupted. This may be difficult to establish and in some cases, it may be that the appliance itself is of poor quality. However, experience has shown that if damage has been caused by a power surge, then the distributor would arrange for them to be replaced. The distributor may argue that they are not liable if the problem is the result of an 'act of God'.

- **High or low voltage**

If a consumer notices that their light bulbs are dimmer and / or electric heaters appear to be cooler than usual, then they may be experiencing low voltage. Low voltage may also damage electric motors and cause them to burn out. Alternatively, if bulbs are brighter and heaters heat up more quickly than usual they could be experiencing high voltage.

The voltage may be affected by a number of factors including the following: how close the property is to the power line / transformer; maintenance being carried out on the network or a neighbouring property starting to use substantially more electricity.

Practical tip

Consumers experiencing voltage issues should report the matter to their local electricity DNO by dialling 105

The following guaranteed standard states that the DNO should either offer to visit to investigate or provide an explanation of the probable cause:

GS reference	Standard	Further details in:
GS(E)15(D)	Voltage complaints	Annex 2

Example

Joanne states that three days ago her electricity supply was unexpectedly disrupted for less than an hour. When the supply was switched back on again, she noticed that the plastic plug on her kettle had melted and there was smoke coming out of some of the other sockets. Her new 42 inch LCD TV had also stopped working. She contacted the distribution service who apologised but said that there was nothing further that they could do.

Advice

Joanne should be advised that the damage may have occurred as the result of a power surge. She may be able to claim against the DNO depending upon the cause of the disruption. She could check her household insurance policy to see if this would cover the claim. Joanne should be advised to complain to the DNO and follow this up by WRDKC / COP in accordance with their complaints procedure. She should be encouraged to call back if the matter is not resolved.

You may receive calls from consumers who have attempted to claim on their household insurance but are unhappy because the insurer has advised that the consumer is responsible for the excess. Depending on the circumstances they may be able to request the excess from the DNO or GT if they have not carried out the service with reasonable care and skill under CRA or if they have been negligent.

(b) Cross polarity issues

Crossed polarity is basically a case of crossed wires. It is where the live and neutral conductors of an electricity supply are reversed. The result is that the consumer's supply will remain live even when the

appliance or socket is switched to the off position. The wiring is likely to have been carried out by an independent electrician or some other person but not the supplier or the distributor. The effect of cross polarity can be that fuses may not work correctly and if the appliance developed a fault, the consumer may receive an electric shock or more extensive damage may be caused to the appliance than normal.

Example

Mrs Simons says that she has noticed a problem with the electricity in her home. Over the past couple of months she has changed a few light bulbs. On each occasion the light switch was in the 'off' position. However, when she changed the light she experienced an electric shock. These shocks have not caused her any injury but caused a brief period of distress at the time.

Advice

Mrs Simons should be advised that it may be that the wiring is not correctly positioned and that as a result the supply in her property remains 'live' even when the lights are switched off. She should be advised that the DNO would not be responsible for this. It would be advisable for Mrs Simons to have the situation rectified by a qualified electrician. Note that if Mrs Simons previously instructed an electrician to 'wire up' the property then she may have a claim against them under the CRA. Mrs Simons should be advised in accordance with RAST protocols.

(c) Poor gas pressure

Consumers may notice that their gas pressure appears to be low. Signs of the problem may include a pilot light on a boiler that regularly fails, or burners on a hob being very low. Low gas pressure may ultimately lead to gas escapes. Gas pressure may be lower than the normal levels for a number of reasons. These reasons may include:

- ✓ blockages in a filter or pipe system
- ✓ the gravity of the gas
- ✓ friction between the gas and pipe wall
- ✓ a defective gas meter

- ✓ the installation of additional or larger appliances

- ✓ sulphidation – this is where black dust appears resulting from a chemical reaction between the hydrogen sulphide in gas and copper pipe work (this may ultimately block filters, valves and injectors in appliances)

- ✓ water ingress – this is where water leaks into a gas main and runs through the pipe, collecting in the area where the pipe begins to incline (this collection could ultimately completely block the supply and the water may cause damage to gas appliances)

- ✓ third party damage

Alternatively the pressure may be excessive. This could also be dangerous as it may damage the appliance or in the worst case scenario could cause an explosion.

Practical tip

Consumers who suspect that they are experiencing excessive or low gas pressure should turn off all appliances and contact the National Emergency Gas Line on 0800 111 999.

Example

Mrs Harper has a service contract with her gas supplier. When they visited to service the boiler the engineer said that the pressure was too low to run the boiler properly. The engineer turned off her gas supply and said that he would arrange for an engineer from the GT to visit to inspect as soon as possible. Mrs Harper is very unhappy as this is very inconvenient.

Advice

Low pressure in a boiler is a safety issue, as low pressure can lead to gas escapes and as a result the engineer should stop the supply if they notice such an issue. Mrs Harper should be encouraged to call back if delays occur in sending out an engineer or if the problem otherwise remains unresolved.

If Mrs Harper was off-supply for a prolonged period and calls whilst still off supply the case may need to be referred to the EHU in accordance with RAST protocols.



Disruptions

Disruptions to supply may occur for a number of reasons including:

- ✓ emergency situations, for example, a consumer has reported a gas leak
- ✓ maintenance and repairs
- ✓ adverse weather conditions
- ✓ capacity constraints
- ✓ accidental disruption due to work being carried out close to pipes and cables

By the nature of the causes of disruptions, some will be pre-planned and others will be unexpected. How the GT or DNO is expected to deal with these disruptions depends upon whether they are planned or not.

(a) Planned disruptions

- **Gas**

If a GT intends to disrupt a consumer's supply to carry out work which is pre-planned they should provide notice to the consumer and in some circumstances provide alternative cooking and heating facilities to PSR customers under the following guaranteed standards:

GS reference	Standard	Further details in:
GS(G)10A(T)	Planned interruptions	Annex 4
GS(G)9(T)	Heating and cooking facilities	Annex 4

PSR consumers

Consumers on the PSR should also be given priority for the restoration of supply SLC(G)6(T).

Practical tip

Consumers who are aware that supply is going to be disrupted should not use gas appliances during this period and should turn them off. If the gas appliance is left on this could be dangerous as air could fill the pipes causing an explosion or, when the gas is switched back on at the mains, it may leak out of the appliance.

Before reconnecting the supply, the GT should ensure that it is safe to do so. The GT will usually carry out a 'purge and re-light' procedure in order to return the gas supply to the property. The GT will visit the property and remove any air or moisture trapped in the system and ensure that the pipes are completely filled with gas. Any pilot lights and boilers could then be 'relit'.

- **Electricity**

It is sometimes necessary for distribution companies to carry out maintenance work on the network in which case the company may intend to disrupt the supply of electricity. The guaranteed standards require DNO to give notice to those affected under the following guaranteed standards:

GS reference	Standard	Further details in:
GS(E)14(D)	Planned interruptions	Annex 2
GS(E)21(D)	Making and forwarding payments	Annex 2

PSR consumers

SLC(E)10(D) states that consumers on the PSR should be given advance notice of planned interruptions to their electricity supply by their distributor and advice to enable them to make alternative arrangements for running essential medical equipment. The consumer should be given appropriate advice and information about what to do in the event that their supply ceases.

Example

Mr Mason has received a letter this morning informing him that his electricity supply will be switched off this afternoon whilst the distributor carries out routine maintenance work. Mr Mason is annoyed about this short notice as his son who lives in a different region is visiting this afternoon to specifically sort out his garden and they intended to use the electric lawnmower and strimmer.

Advice

Mr Mason should be advised that the distributor should generally give at least two days notice of any planned interruptions to the supply and if they do not Mr Mason may be able to claim a payment of £22

provided that he claims within one month. He should be advised that there are some exemptions to this. He should contact the local distributor and WRDKC / COP in accordance with their complaints procedure and confirm this in writing. He should be encouraged to call back if the matter is not resolved.

(b) Unplanned disruptions

These often result from adverse weather conditions or accidental damage to pipes, cables, gas mains and overhead lines.

- **Gas**

The following guaranteed standards provide that generally the GT should restore supply to consumers within a prescribed period of time and that PSR customers may be entitled to alternative heating and cooking facilities:

GS reference	Standard	Further details in:
GS(G)7(T)	Supply restoration	Annex 4
GS(G)9(T)	Heating and cooking facilities	Annex 4

PSR consumers

PSR consumers should also be given priority for the restoration of supply under SLC(G)6(T).

Practical tip

Consumers who are currently off supply should be advised to contact the National Emergency Gas Line on 0800 111 999.

- **Electricity**

The supply of electricity to a consumer's property could cease due to a problem with a faulty appliance or wiring in the property. Alternatively there could be a problem with the supply of the electricity affecting a number of properties. When the electricity supply disrupts a number of properties this is often referred to as a 'power-cut' or a 'blackout'.

Practical tips

Consumers who are currently off-supply should dial 105.

Consumers may be guided to take the following steps if their supply is currently disrupted or they receive notice that it will be disrupted in the future:

- ✓ the consumer should check their trip switch to see if the problem is actually with an appliance in the property rather than the supply itself. If they have a PPM they should check the meter as the problem could be with the meter or the PPM credit device in which case the meter will usually display a code / message to alert the consumer of this
- ✓ ensure that they have and use alternative forms of heat and light at the property where possible (for example candles, torches, battery operated heaters or portable gas fires such as calor gas and those used for camping)
- ✓ alternative cooking sources should also be used where available, for example camp stoves
- ✓ radios that run on batteries or wind-up radios may be helpful as there may be regular broadcasted updates
- ✓ appliances should be unplugged but a light switch should be left in the 'on' position so that they will know when the power has been restored
- ✓ depending on the length of the disruption, it may be necessary to consider finding an alternative place to stay. Some consumers may be able to claim for this under their household insurance policies
- ✓ consumers reliant on electricity for medical reasons should try to ensure that they are on the PSR or they should otherwise inform the DNO of this as they may be able to receive further assistance

PSR consumers

When consumers are added to the PSR the DNO should supply information and advice about what precautions to take and what to do in the event of an interruption to supply. During unplanned interruptions the DNO should (as far as is reasonably practicable) ensure that the consumer is promptly notified and kept informed of when the supply is likely to be restored and of any help and advice that may be available SLC(E)10(D).

The following guaranteed standards provide that where there has been a fault on the network the DNO should pay consumers if the supply is not restored within the specified periods. The time periods and payments that apply depend upon in some cases, the cause of the disruption and in others, the weather conditions.

GS reference	Standard	Further details in:
GS(E)5,6,7,9(D)	Restoration of supply	Annex 2
GS(E)8(D)	Rota disconnections*	Annex 2
GS(E)11(D)	Multiple disruptions	Annex 2
GS(E)12(D)	Failed distributor fuse**	Annex 2

***rota disconnections** – if there is a supply shortage within the area, the DNO may need to disrupt the supply on a rota basis in order to share the load

**** failed distributor fuse** – when the DNO receives information that leads them to the conclusion that their fuse between the supply cable and the consumer’s meter may have failed

Practical tip

Consumers experiencing disruptions to supply should be advised to make a note of the date and time of each disruption so that in the event that they experience multiple disruptions they will have a record to validate their claim.

Example

Mrs Underhill is a pensioner who states that she was without gas for two days last week due to a 'burst gas main'. She has been chatting to her neighbours today and they said that they were given an electric fan heater and a bottled gas cooker to use. She is upset as she had to go to the local café to get a hot meal.

Advice

Mrs Underhill should be advised that consumers on the PSR should generally be provided with alternative cooking and heating facilities within four or eight hours depending on the circumstances and if they fail to do this the consumer may be entitled to a payment of £24. They should also aim to restore the supply

within 24 hours and if they do not the consumer may be entitled to a payment of £30 for the first 24 hours and a further £30 for each additional 24 hour period that they are without supply. She should be advised that exemptions may apply. Mrs Underhill should be advised to complain to the DNO by WRDKC / COP in accordance with their complaints procedure. She should be encouraged to call back if the matter is not resolved.

Excavations and other maintenance

(a) Gas mains and service pipes

GT may need to carry out excavations or other work on a consumer's land to relay or otherwise maintain service pipes or carry out work on a gas main which is situated on the consumer's premises. The Gas Code states that GT must maintain, repair or renew all service pipes and will bear the cost of this unless the work is necessary as a result of intentional acts or negligence of the consumer. The following guaranteed standard requires that the premises are 'reinstated' within a prescribed period:

GS reference	Standard	Further details in:
GS(G)8(T)	Reinstatement of property	Annex 2

The GT is responsible for reinstating the premises and they must repair or replace drives, paths and other access routes so that they are 'reasonably fit' for the type of access for which they are used. Note that the supplier is not necessarily required to reinstate the access to the same condition that it was in before the work started and therefore replacement surfaces may not match the existing premises in terms of colour and materials used. Other parts of the consumer's premises such as gardens and lawns must be reinstated, as far as is practicable, to a reasonable standard and with reasonable care and skill having regard to the condition prior to the commencement of the work.

Example

Carlos has been visited by representatives from a gas company who excavated a number of holes in his garden as part of their project to upgrade gas mains in the area. Carlos states that his garden and driveway are ruined. He thought that the company would ensure that they were left in the same condition that they were in when they found them.

Advice

Carlos should be advised that the GT is responsible for reinstating his property, even if contractors completed the work on their behalf. In the case of the driveway, the obligation is simply to make sure that it is 'reasonably fit' to be used as a driveway. However, the garden should have been reinstated to a

reasonable standard, with reasonable care and skill having regard to the condition it was in before the work started. Carlos may be able to claim a payment of £50 from the GT if they have not completed reinstatement to the required standard within five working days. Carlos should contact the GT and confirm his complaint by WRDKC / COP in accordance with their complaints procedure. He should be encouraged to call back if the matter is not resolved.

(b) Electricity repairs and maintenance

The DNO is responsible for maintaining the network and safety of the network and therefore has to ensure that their equipment on the consumer's premises is maintained appropriately (Electrical Safety, Quality and Continuity Regulations 2002). If a DNO carries out work on a consumer's property that may involve an excavation or other forms of damaging the consumer's premises, this is not covered by the guaranteed standards. Also there is no specific piece of energy law or energy code that would apply to this situation. It may be possible that the consumer could make a claim using the law of negligence if appropriate to make a claim against the supplier.

Practical tip

When excavations have taken place in public places, for example, on roads and pavements, sometimes consumers complain that work appears to have stopped but there is still a hole in the ground or traffic lights, hoarding and equipment remains. They should be advised to contact the relevant GT or DNO that is carrying out the work. The site will usually have a sign containing a telephone number that they can contact.

(c) Wayleave agreements and easements

DNO and GT may ask a consumer to grant them permission to access their premises to install and maintain plant and equipment. Alternatively, the consumer may move to new premises where it appears that this permission is already in place. Permission is often granted by use of a wayleave agreement or an easement.

- **Wayleave agreements**

This agreement between the consumer and the DNO or GT provides rights to them to access the consumer's property and to install and maintain plant and equipment on the property, for example, overhead lines and underground cables and pipes. The agreement will provide for the consumer to receive an annual payment for granting these rights. This money represents an element of rent and an element of

compensation. These are in effect licenses that can be brought to an end by giving notice in accordance with the terms and conditions.

- **Easements**

An easement exists when the DNO or GT is granted an interest in land giving them rights to install and maintain plant and equipment. This gives a more permanent right over the land and the DNO or GT will usually make a one-off payment to the consumer if they are granted an easement.

Practical tip

Consumers requiring advice about easements and wayleaves should obtain independent legal advice.

Summary

- Issues may arise with the quality of the supply to a consumer's property. This could be the result of voltage issues, crossed wires or poor gas pressure.
- The normal voltage for an electricity supply is 240 volts. The voltage may vary due to a power surge, which may in some circumstances damage appliances or equipment and the consumer may be able to claim for this if the supplier is at fault. The guaranteed standards provide that queries regarding voltage should be responded to within a prescribed period otherwise the consumer may be entitled to a payment.
- Unusually low or high gas pressure can be dangerous and consumers should report pressure issues to the National Gas Emergency Line.
- Disruptions to supply may occur for a number of reasons. Sometimes disruptions are planned, for example, to carry out maintenance work, and at other times they are unexpected, for example they occur as a result of severe weather conditions. GT and DNO must generally give advance notice of any intended disruptions to gas or electricity supplies and if they do not they may have to make a payment to the consumer.
- They also have extra responsibilities in relation to consumers on the PSR. In the gas of disruptions to gas they may have to provide alternative cooking and heating facilities. Electricity DNO should ensure that such consumers are kept informed of when the supply is likely to be restored and offer appropriate help and advice.
- GT and DNO must aim to restore the supply within specified periods under the guaranteed standards and if they do not, the consumer may be entitled to a payment.
- GT may have to interfere with a consumer's property to carry out repairs and maintenance on their network. The guaranteed standards provide that they must reinstate the consumer's premises to a particular standard within a set timescale and if they fail to do this, the consumer may be entitled to receive a payment. There is no equivalent standard for electricity DNO. DNO may have wayleave agreements or easements over a consumer's property enabling them to gain access to the premises to carry out work.
- Excavations sometimes occur in public places such as a public highway. Members of the public who have concerns about the state of the site should contact the relevant GT or DNO to report the problem.

- Consumers may be able to use non-industry specific law to make a claim where there are gaps in the protection provided within the industry. Actions in contract law may be based upon the breach of express terms of the contract or implied terms under the CRA. Alternatively, the law of negligence may be used to make a claim. However, consumers must be aware that liability may have been excluded or limited in the contract but these clauses will be subject to the CRA.

Applicable guaranteed standards

GS reference	Standard	Further details in:
GS(E)15(D)	Voltage complaints	Annex 2
GS(G)10A(T)	Planned interruptions	Annex 4
GS(G)9(T)	Heating and cooking facilities	Annex 4
GS(E)14(D)	Planned interruptions	Annex 2
GS(E)21(D)	Making and forwarding payments	Annex 2
GS(G)7(T)	Supply restoration	Annex 4
GS(E)5,6,7,9(D)	Restoration of supply	Annex 2
GS(E)8(D)	Rota disconnections	Annex 2
GS(E)11(D)	Multiple disruptions	Annex 2
GS(E)12(D)	Failed distributor fuse	Annex 2
GS(G)8(T)	Reinstatement of property	Annex 4

Section 3

Safety

In your role as an advisor you may be faced with a number of queries and complaints relating to safety issues. It is important to ensure that consumers can safeguard themselves and attempt to take steps to minimise the chances of any damage being caused to their person or property. It is also important that the industry has adequate protection in place. Gas safety is of particular importance and SLC(G)29(S) provides that consumers should be provided with certain safety information on an annual basis or when requested including: information about the safe use of appliances, details of carbon monoxide poisoning and the benefits of audible alarms, the benefits of gas safety checks and where to get advice if appliances are condemned. These issues, along with electrical safety issues will be discussed in this section.

In this section we will look at the following areas:

- Gas leaks
- Hazards on electricity lines, electricity substations and overhead lines
- Carbon monoxide poisoning
- Gas safety checks
- Property repairs and maintenance
- Unsafe appliances & installations

Gas leaks

Gas leaks are extremely dangerous and should be reported immediately so as to minimise any potential harm. Gas leaks may incur inside the consumer's property and the source could be the internal pipe work, a boiler or fire or other gas appliance. Sometimes consumers also report the smell of gas outside.

Where there is an escape of gas the person responsible for the premises (generally the occupier) must take reasonable steps to prevent further escape (by shutting off the supply) and inform the supplier if the gas continues to escape after the supply has been cut off or if the smell persists (The Gas Safety (Installation and Use) Regulations 1998 s37). The supplier must prevent the gas from escaping within 12 hours of being informed of the escape (there are some exceptions to this). The meter is required to have a permanent notice explaining the procedure to be followed in the event of a gas leak.

National Grid operates the National Gas Emergency Number. This is a 24 hour service.

Important

Consumers who smell gas or suspect that there is a gas leak either inside or outside of their property should contact the National Gas Emergency Line on 0800 111 999 (note – they should also call this number if they suspect a leak of carbon monoxide).

Practical tips

If the gas leak appears to be inside the consumer's property they should be guided to take the following steps where possible:

- ✓ do not smoke or strike any matches or have any naked flames in the vicinity
- ✓ do not turn any electrical appliances or switches on or off (including lights and door bells)
- ✓ open any doors and windows to let out the gas
- ✓ turn off the gas supply at the meter using the control valve (this may have to be avoided if the meter is in the cellar as the consumer should not switch on any lights)

National Grid will arrange for an engineer from the gas distribution company who owns the network in the area to visit the property. This consumer will not have to pay for this visit. A **'controlled' escape** is one where the gas emergency control valve has been switched off and the smell has gone. Other leaks are referred to as **'uncontrolled'**. National grid state that they aim to attend uncontrolled escapes within one hour and controlled leaks within two hours.

If the leak is inside the property the engineers will make it safe by turning off the supply. The supply for any heating and cooking appliances will be maintained if it is safe to do so. The engineer may fix the appliance or installation pipe work if it can be completed within 30 minutes, but they cannot carry out repairs that cannot be completed within this time. Also the repair will only be carried out if it can be done at £4.65 or less (Gas Transporter SLC 6.9). If they are unable to repair the appliance they will isolate the appliance and turn on the supply. They will advise the consumer that work on any appliances would have to be carried out by a Gas Safe registered engineer.

Example

Mr Swan is a young man who suspected that he had a gas leak in his property as there was a strong smell of gas contacted the National Gas Emergency Service who came out to his property. They said that the leak was coming from his gas fire which is quite old. They have stopped the supply of gas to the fire but have now left the property saying that he will need to organise the repairs. Mr Swan thought that they would have repaired the problem.

Practical advice

Mr Swan should be advised that National Grid is only obliged to carry out repairs if they can be done within 30 minutes and would cost £4.65 or less. If the repair will take longer then the engineer would not carry out the repairs. Mr Swan should be advised that he will have to make arrangements to have the repairs carried out by a Gas Safe registered engineer. Details can be found at www.gassaferegister.co.uk. Any further action and advice about organising the repair of the fire should be considered in accordance with protocols.

Hazards on electricity lines, substations and overhead lines

The wires on a wooden electricity line may become detached. Alternatively, a member of the public may spot another potential hazard on an overhead electricity line.

Practical tips

Those who spot problems should be advised to take the following steps:

- ✓ do not touch or go near the line / wire

- ✓ alert people in the area to the problem and advise them to evacuate the area

- ✓ contact the electricity emergency number (0800 404090)

You may receive queries from consumers who are concerned that a substation or an overhead line is located near to their home, child's school or place of work. They may ask if substations are unsafe and if they can be moved if they are located next to their property. The Electrical Safety, Quality and Continuity Regulations 2002 contain provisions relating to substations and overhead lines.

Substations can be dangerous if people come into contact with the voltage that is produced and could result in death or serious injury. The law that covers substations does not provide for any minimum distances between substations and properties. Overhead lines should not, as far as reasonably practicable, come so close to any building tree or structure so as to cause danger. The Regulations impose requirements on the generators and DNO to ensure substations are enclosed and overhead lines supports are suitably equipped to prevent unauthorised access as far as is reasonably practicable and they also require safety notices to be displayed.

Carbon monoxide poisoning

A number of deaths occur each year as the result of Carbon monoxide (CO) poisoning. You may receive queries at Citizen's Advice from people who are worried about this and would like guidance on how to spot the problem and what action they can take to avoid it happening.

CO is produced when there is incomplete combustion of natural or petroleum gas, in other words it occurs when gas does not burn properly. Any product burning oil or solid fuel such as coal, wood or petrol can also produce carbon monoxide. It can be difficult to detect as it is invisible. It has no colour, odour or taste. CO is dangerous as when it is inhaled organs and cells are starved of oxygen as it reduces the blood's ability to transport oxygen around the body.

Practical tips

The following may indicate that CO is being produced:

- ✓ pilot lights that frequently die out
- ✓ flames that are yellow or orange instead of blue (but note in fuel effect fires or flueless appliances the flame is often displayed in this colour)
- ✓ soot or a black brown or scorched appearance on appliances
- ✓ excessive condensation appearing on windows

Those suspecting that CO is present in their property should take the following steps:

- ✓ contact the National Emergency Line on 0800 111 999
- ✓ evacuate the property if possible
- ✓ if they are suffering from symptoms seek urgent medical attention from the GP / A&E department
- ✓ switch off the appliance and do not use it
- ✓ switch off the gas supply at the meter control valve
- ✓ if repairs need to be made to appliances ensure that these are carried out by a Gas Safe registered engineer

Common causes of CO include gas appliances (such as heaters, boilers, water heaters and cookers), fires and flues that have not been properly installed or maintained or that are poorly ventilated. Consumers sometimes block a vent to prevent draughts. If this is seen by a gas engineer the appliance may be condemned and it is illegal to use the appliance until ventilation is installed or restored. In some instances 'downdrafts' may occur in a property where air is blown down a chimney forcing CO into the room. If this is the case the consumer may have to have a cowl or a new flue fitted.

(a) What are the symptoms of CO poisoning?

People are often unaware that they are suffering from carbon monoxide poisoning because the symptoms are similar to those caused by other common medical problems. Symptoms may include:

- | | |
|-------------------------|-------------------|
| ✓ headaches | ✓ tiredness |
| ✓ breathlessness | ✓ vomiting |
| ✓ nausea | ✓ diarrhoea |
| ✓ dizziness | ✓ chest pains |
| ✓ collapse | ✓ stomach pains |
| ✓ loss of consciousness | ✓ visual problems |

A sign that these may be the result of CO poisoning would be if the symptoms reduce when the appliance is not in use or the person leaves the property and they worsen when the appliance is switched on or the person returns.

(b) Preventative action

It is advisable for consumers to obtain an audible carbon monoxide detector. These can be purchased in most DIY and hardware stores. Alarms purchased in the UK comply with British or European Safety standards (for example, they could display a British Standard EN 50291 mark - also written as BSEN 50291 or show the CE mark and have a British or European Kite mark). Note that consumers should still have a separate smoke detector as CO detectors do not detect smoke and vice versa.

There are a number of other things that consumers can do to reduce the chances of CO being produced in their home. Possible actions include:

- ✓ ensure that any new appliances are installed by a Gas Safe registered engineer who is competent in that particular area of work
- ✓ when a detector has been fitted, check it regularly, replace the batteries when required and replace the detector in accordance with the manufacturers' instructions
- ✓ chimneys and flues should be checked regularly (to ensure that they are not obstructed by vegetation or wildlife) and should be swept regularly (once every year)
- ✓ consumers should arrange to have annual gas safety checks (see below)

Gas safety checks

The Health and Safety Executive, along with other consumer organisations recommend that all appliances, flues and pipe work should be serviced at least annually by a Gas Safe registered engineer. It is also advisable to get boilers and other appliances checked if they use other carbon based fuels, such as coal, wood or oil. This will help to reduce the risks of carbon monoxide poisoning and gas leaks caused by faulty appliances. The consumer would normally have to pay for this service.

(a) Priority Services Register

Some consumers on the PSR qualify for a free gas check. The consumer must not live in rented accommodation and must be on means-tested benefits. The consumer must either:

- ✓ live with others, including one under five years old, or
- ✓ be of pensionable age, disabled or chronically sick and either:
 - ✓ live alone, or
 - ✓ live with others who are all pensionable age, disabled, chronically sick or under 18.

(b) Landlords

The Gas Safety (Installation and Use) Regulations 1998 require landlords of rented accommodation to have the gas appliances that belong to the landlord and flues checked by a registered gas engineer every 12 months. As part of the checks, if the engineer finds that any appliances are unsafe they will make them safe, for example by disconnecting them. The engineer will issue a gas safety certificate that will list all gas appliances and note any problems with them. The landlord must issue the tenant with a copy of the certificate and it is their responsibility to ensure that any necessary repairs are carried out.

Practical tips

TSS deals with complaints regarding unsafe appliances in rented furnished accommodation. If the consumer states that they are living in such accommodation and there are unsafe appliances or the gas safety check has not been carried out, the consumer should be advised in accordance with RAST protocols.

If a consumer has a complaint about the quality of the service provided by an engineer as part of the gas safety check, the consumer may have rights under the CRA and / or negligence. Such cases should be handled in accordance with RAST protocols.

Property repairs and improvements

When consumers are having work done to their property (for example new drives and extensions) or even when they are gardening, the activities involved could affect the gas pipes and electric cables or overhead lines. Below is an outline of the issues that they may have to consider in these circumstances.

There is no legal minimum depth for the laying of cables and pipes underground. There is industry guidance but these measurements cannot be relied upon when digging or excavating because changes that occur to ground conditions such as soil erosion, earth movement and ground leveling could mean that the depth will change over time.

If work is being carried out near overhead lines, it is very important to take precautions as electricity can flash from the lines even when they are not touched by any equipment.

If a consumer causes damage to any of the pipes, cables or overhead lines, the gas GT or electricity DNO may make a claim against them for the damage that has been caused.

When making changes to the garden, consumers may have to consider the potential location of any trees and other large plants that they intend to plant, to take into account pipes, cables and overhead power lines.

As regards overhead power lines, National Grid cannot prevent people from planting in the vicinity although there are minimum safety clearances in place. National Grid has a duty to make sure that any trees do not get too close to the line. Ideally, only low height, slow growing plants should be placed in the vicinity of these lines.

The roots of trees could disturb electricity cables and prevent access to them. As a result there are prescribed planting distances between trees and underground services. It is a requirement to get approval from National Grid in relation to planting above underground gas pipelines as only certain plants are allowed.

Practical tips

Consumers having work done to their property should be advised of the following:

- ✓ plans of pipes should be obtained from the pipeline operator in the case of gas or the local DNO in the case of electricity for cables and overhead power line routes (note there may be a charge for this service)
- ✓ it may be possible to have the overhead power lines switched off if the owner is given sufficient notice
- ✓ experienced professionals should have safe digging procedures and they may also have devices to locate gas pipes
- ✓ the Health and Safety Executive has guidance on avoiding damage to buried services (gas) and how to reduce risks when working near overhead lines. This can be found on their website (www.hse.gov.uk)
- ✓ if damage is caused to a gas pipeline during works, the consumer should contact the emergency line: 0800 111 999
- ✓ if damage is caused to an electricity cable or there is a problem with the overhead power line, the consumer should contact the emergency line on 0800 404090
- ✓ consumers may face financial claims if they damage gas or electrical plant or equipment – they may be guided to seek independent legal advice
- ✓ consumers should obtain technical advice from National Grid's Plant Protection Team before landscaping their property on 0800 688 588

If the consumer directs a query to a gas GT in relation to the location of gas pipes, a response should be provided within five working days and if they fail to do so the consumer may be entitled to £40. There is not an equivalent standard for electricity.

GS reference	Standard	Further details in:
GS(G)10(T)	Response to a land enquiry	Annex 4

Example

Mrs Archer was digging a hole to plant a tree in her garden and she hit a gas pipe. She immediately reported this to the GT who sent out an engineer to repair. However, Mrs Archer complains that they have now sent her a letter containing an invoice for the repairs. Mrs Archer wants to know if she has to pay this invoice.

Advice

The consumer is responsible for damage that they cause to the pipeline. It is advisable that Mrs Archer obtains some independent advice in relation to this matter. For future reference, it is always advisable to contact the National Grid Plant Protection Team before carrying out any planting or digging in the garden. They will be able to provide advice on the potential locations of pipes and it is also necessary to get permission from National Grid to plant on underground pipelines.

1.1 Unsafe appliances and installations

Consumers may contact Citizens Advice believing that there is a problem with their electricity or gas supply when the problem is actually the result of a faulty appliance, wiring or installation. Most modern electric circuits have a circuit breaker fuse system which is designed to stop the supply of electricity to the relevant circuit if a problem occurs. Problems could include: a light bulb that has blown, too many appliances being used at the same time, a faulty appliance or immersion heater, a kettle being over filled or a toaster that has not been cleaned. Alternatively, there could be a problem with the wiring in the property.

Suppliers are not responsible for unsafe domestic appliances or wiring or other installations carried out by independent electricians and gas engineers (for example, central heating installations). Remember that the consumer may be able to make a claim against the seller of goods or supplier of the service using the law that relates to defective goods and services (for example, CRA, the law of negligence or the Consumer Protection Act 1987).

However, GT, DNO and suppliers do have to act accordingly if they identify a potential danger to public health or safety. Therefore, in the case of gas, their representatives may take action such as condemning a gas appliance if it is deemed to be unsafe. As part of the process they would stick a label on the appliance and provide a report which will explain why they have taken this action. It is an offence to use a gas appliance that has been condemned or otherwise use a gas appliance that the consumer suspects is unsafe (Gas Safety (Installation and Use) Regulations 1998) and it could also invalidate household insurance policies.

The Electrical Safety, Quality and Continuity Regulations 2002 state that when connections are made or proposed the distributor can issue a notice requiring repair work to be carried out if it feels that an installation may endanger or interfere with their network. If the work is not done within the specified period they can disconnect or refuse to connect. Disconnection can take place without notice on the grounds of safety where appropriate. The supply will be restored once the remedial action has been taken.

Practical tips

Consumers with faulty appliances or those wish to complain about substandard electrical installations carried out by independent electricians or gas engineers should be advised in accordance with RAST protocols.

Summary

- Gas leaks should be reported immediately to the National Gas Emergency Line. An engineer will be sent out who will make the area safe and may even repair appliances or installations if these can be completed within 30 minutes for £4.65 or less. Consumers should be advised of the practical steps that they can take in order to minimise potential dangers.
- Consumers that spot hazards on electricity lines should contact the local DNO and should be advised not to touch the line / wire and to alert others in the area to the problem.
- CO poisoning causes a number of deaths each year and occurs when gas does not burn properly. It can be difficult to detect as it is odourless, colourless and tasteless but consumers can buy CO detectors. Common causes include gas appliances that have not been properly installed or maintained or that are poorly ventilated. Consumers who think that they have been subject to CO poisoning should contact the National Gas Emergency Line and seek medical attention.
- It is advisable for consumers to have an annual gas safety check. Those on the PSR may be entitled to a free safety check. Landlords must have their appliances and flues checked every 12 months.
- Electricity sub-stations can be dangerous if people come into contact with them but the law does not prescribe minimum distances between substations and other properties.
- Those having work done to their property or planting trees and plants should consider that this may interfere with pipes, mains, cables and overhead lines. They should ensure that they obtain details of the locations of pipes and cables, adopt safe digging practices and obtain approval where appropriate.
- Suppliers are not responsible for faulty appliances or substandard wiring and other installations carried out by independent electricians or gas engineers. Consumers who experience these problems should be advised in accordance with protocols for further action and advice.

Applicable guaranteed standards

GS reference	Standard	Further details in:
GS(G)8(T)	Reinstatement of property	Annex 4



G)10(T)	Response to a land enquiry	Annex 4
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