PELG-PETEL No.20

Electric Vehicle Charging Equipment on Petrol Forecourts

Petroleum (Consolidation) Regulations 2014
Dangerous Substances and Explosive Atmospheres Regulations 2002
Electricity at Work Regulations 1989

Guidance to PEA’s on their role when Electric Vehicle Charging Equipment (EVCE) is installed on Petrol Filling Stations and to site operators on their responsibilities in relation to EVCE.

Foreword

This guidance forms part of a series of PETELs issued as part of the PELG-PETEL series from 2012 onwards by the Petroleum Enforcement Liaison Group (PELG), a health and safety advisory committee hosted by the Energy Institute. It comprises representatives of the Retail Petroleum Industry, the Petroleum Enforcement Authorities (PEAs) and the Environment Agency, with technical support from the Health and Safety Executive.

PETELs are a mechanism for PELG to disseminate advice, guidance and good practice with the purpose of:
- facilitating appropriate and consistent enforcement by PEAs; and/or
- advising duty-holders on how to comply with the law.

Important Disclaimer

This guidance has been produced and reviewed as described in the foreword.

The Energy Institute (EI) shall have no liability arising out of or in connection with this guidance or its use or application whether in contract, tort (including but not limited to negligence), breach of statutory duty, under statute, by reason of misrepresentation or otherwise.

This PETEL is solely concerned with promoting the awareness of guidance and benefits of shared information for the installation of electric vehicle charging equipment on petrol filling stations.
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Overview

The use of alternative energy sources for vehicles is increasing across the industry, particularly the inclusion of electric vehicle charging equipment (EVCE) on petrol filling stations. It has been identified that a number of such installations were completed prior to the publication of the 4th edition of the Blue Book (April 2018) and 3rd edition of the IET Code of Practice for Electric Vehicle Charging Equipment Installation (August 2018); both of which provide specific advice for installations of this kind.

This PETEL highlights the considerations to be taken by site operators prior to the installation of EVCE, or when reviewing the existing arrangements.

This PETEL also addresses concerns raised by enforcing authorities and industry regarding installations where power supply to the chargers is provided by a separate feed from that of the main forecourt and the impact this may have on emergency protocols.

Please note: that the implementation of the Automated and Electric Vehicles Act 2018 enables the creation of regulations, which may be used in future to legislate the provision of EVCE on large fuel retailers or service area operators. For this reason we are keen to raise awareness of the available guidance and gather information through this letter.
PART 1

Legal framework

The health and safety risks from Electrical Vehicle Charging Equipment should be controlled using the Health and Safety at Work etc Act and The Electricity at Work Regulations 1989 (EAWR). These regulations require precautions to be taken against the risk of death or personal injury from electricity in work activities. Further information can be found at http://www.hse.gov.uk/electricity/.

When introducing a new piece of equipment into a workplace, you should assess the risks and consider the impact it may have on any other areas of work.

Only equipment which is suitable in explosive atmospheres (known as ATEX equipment) should be used in hazardous zones, as defined by the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR). EVCE therefore should not be installed in hazardous zones of a petrol forecourt unless it is appropriately ATEX certified. The location of the EVCE should be carefully considered as part of the assessment of risks. Further information on electricity in explosive atmospheres can be found at http://www.hse.gov.uk/electricity/atex/index.htm.

Enforcing authority

Petroleum Enforcement Authorities (PEAs) are rarely the authority for enforcing EAWR, this would ordinarily fall to Environmental Health Officers (EHOs) in local health and safety teams. However, as PEAs are more likely to visit or inspect petrol filling stations, they should be aware of the risks related to this type of equipment to address any immediate concerns on site (eg location of EVCE in a hazardous zone) or to provide information to the relevant EHO.

Does the Installation Constitute a Prescribed Material Change?

No.

The Petroleum (Consolidation) Regulations only require certain prescribed material changes to be notified to the PEA and the installation of EVCE does not constitute such a change.
PART 2

Items to consider regarding installation of EVCE on Petrol Filling Stations

- Safe location away from the hazardous zones.

- Risk of death or serious personal injury by electrocution of any person within the proximity of the EVCE, such as staff members, contractors, members of the public, emergency service personnel etc.

  Note: The risk of harm or serious injury from electrocution can be reduced by ensuring that the installation is installed correctly by a competent person and maintained correctly, as required by EAWR.

- Where there are two or more separate electrical supply systems on the same premises, there may be different earthing arrangements for these systems and guidance recommends they are interlinked. The emergency procedures must reflect how the site can be isolated safely.

- The need for fire fighting equipment that is suitable for electric vehicle and or electric vehicle charging equipment should be considered as part of a risk assessment.

Full guidance can be found to address the fundamental risks listed above, by utilising the following national guidance documents:

- Code of Practice for Electric Vehicle Charging Equipment Installation – 3rd Edition from The Institution of Engineering and Technology
- HSE guidance on electricity at work http://www.hse.gov.uk/electricity/faq.htm#maintaining-it-safely
- BS7671:2018 Requirements for Electrical Installations
PART 3

Actions recommended for Petroleum Enforcement Authorities

The template letter / email in Appendix A is designed to provide advice on the safe installation of EVCE and to ask the site operator to volunteer information to assist and safeguard fire rescue services in an emergency.

Where a site operator has responsibility for a number of sites within a designated area, it would be sufficient to send one letter / email to the site operator for all the sites they are registered as being responsible for, within the jurisdiction of the PEA.

Should site operators request further guidance or advice on any specific element e.g. TT earthing, PEAs should direct operators to the relevant guidance documents available and advise the use of competent persons able to provide site specific guidance.

When provided with responses from site operators, the steps to be taken to inform fire rescue services will be dependent upon whether or not the PEA is operating as a Fire and Rescue Service.

For PEAs who operate as a Fire and Rescue Service:

Upon receiving a response from the site operator, please refer the key information to the relevant department to ensure this is placed on the risk database for attending crews.

An example of the key information could be: [site address], no.2 rapid electric vehicle charge points installed on north east side of site, adjacent retail unit. Separate power feed; isolation switch on front of retail unit will not isolate power to charge points, however isolator for charging equipment can be found…..

It is also paramount that this information is shared with the Local Authority Environmental Health department.

For PEAs who do not operate as a Fire and Rescue Service:

The National Fire Chief Council fully supports the use of this letter and asks for PEAs to make contact with their Local Authority EHOs and the head office of the Fire and Rescue Service within their area, to provide the necessary information. This will enable the Fire Rescue Service to provide such information to local crews when attending an incident at that address. Please refer to the example above as a reference for the type of information to provide.
Dear Sir/Madam

Premises: +

INSTALLATION OF ELECTRIC VEHICLE CHARGING EQUIPMENT ON PETROL FILLING STATIONS

Background

Developments within vehicle technology along with government initiatives and legislation has already or will result in electric vehicle (EV) charging equipment being installed on petrol filling stations (PFS). The risks from this equipment need to be managed effectively as with other health and safety risks.

What do I need to do as a petrol operator?

As a dutyholder you are required to consider the risks any new activity or equipment brings to a workplace.

The Electricity at Work Regulations 1989 requires you to assess the risks from electrical equipment and implement control measures which reduce the risk of injury or death. This includes ensuring electrical equipment is safely installed and maintained.

EV charging equipment in situ

Where EV charging equipment has been installed with a separate electrical supply from the petrol forecourt, there is also likely to be a separate isolation switch and guidance recommends they should be interlinked or labelled if this is not possible. It is important that this is addressed in the emergency procedures so that anyone responding to an incident can isolate the site safely. This information should be communicated to staff and the Petroleum Enforcing Authority (PEA) (see below).
Planning to install EV charging equipment

EV charging equipment should not be installed within hazardous zones of the forecourt as defined by the Dangerous Substances and Explosive Atmospheres Regulations 2002 due to the risk of an ignition source. This includes the charging cable and any vehicle when charging at the full extent of the charging cable.

The above highlights issues that we are aware of on sites and further information about the safe installation and maintenance of EV charging points is available in the guidance listed below.

Alerting the PEA to EVCE on site

The fire and rescue service may need to respond to an incident at a petrol filling station and the presence of EV charging equipment may impact their emergency response procedure. Both the Petroleum Enforcement Liaison Group (PELG) and the PEA request that as part of implementing your revised emergency procedures following installation of or prior to installing EV charging equipment you inform us &/or your local Fire and Rescue Service.

Note: Upon receiving this information, PEAs & / or Fire and Rescue Services will share this information with the Local Environmental Health department.

Guidance, standards and codes of practice

There is guidance to help you assess the risks from EVCE:

- HSE guidance on electricity at work
  [http://www.hse.gov.uk/electricity/faq.htm#maintaining-it-safely](http://www.hse.gov.uk/electricity/faq.htm#maintaining-it-safely)
- BS7671:2018 Requirements for Electrical Installations
- Institution of Engineering and Technology Code of Practice: Electric Vehicles Charging Equipment Installation (priced publication).
- PELG-PETEL XX Electric Vehicle Charging Equipment

It is the responsibility of the site operator/keeper to ensure all works are carried out to a safe and satisfactory standard in line with the legal requirements, guidance and standards available. Compliance with your legal responsibilities cannot be devolved to third parties. Please be aware that during the periodic electrical inspection of the site, should the competent electrician identify any safety concerns and breaches to the standards/guidance, it is your responsibility as the site operator to ensure they are rectified.

Any queries regarding this letter should be addressed to the person named below.

Yours faithfully,
Reply to
Direct T