



Office for Product
Safety & Standards

The Alternative Fuels Infrastructure Regulations 2017

Office for Product Safety and Standards

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The Alternative Fuels Infrastructure Regulations

The Regulations

Primary Legislation – The Automated and Electric Vehicles Act 2018

Secondary Legislation – The Alternative Fuels Infrastructure Regulations 2017 (2017 No.897)

The Alternative Fuels Infrastructure Regulations 2017 ensure the way that alternative fuels (electricity and hydrogen) are supplied to vehicles or ships is consistent across the UK.

The Alternative Fuels Infrastructure Regulations came into force on 9 October 2017.



Office for Product
Safety & Standards



Office for Zero Emission Vehicles

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Why do the regulations exist?

Prior to the regulations, infrastructure operators put in place various approaches to the supply of Alternative Fuels to customers. The regulations purpose is to create a consistent approach that will remove barriers to the uptake of zero emission vehicles. This is to promote the use of technologies that will help achieve the 2050 net zero targets outlined in the Climate Change Act 2008 (2050 Target Amendment) Order 2019 as well as the UK's ambition of prohibiting the sale of new internal combustion engine road vehicles by 2030.

The regulations establish a common framework of measures for the deployment of alternative fuels infrastructure which:

- Ensure publicly accessible alternative fuel infrastructure for road transport complies with technical specifications
- Guarantee a minimum level of access and information for consumers

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What's covered?

Public EV Chargepoints

A public chargepoint is an interface which is accessible to the public and is capable of charging one electric vehicle at a time or exchanging a battery of one electric vehicle at a time.

Those intended for use by members of the general public (including those situated in public car parks, whether or not those car parks are available only to consumers of specific goods or services)

In the Guidance document, OPSS's current interpretation is that these include:

- Publicly owned car parks
- Residential car parks where parking bays are not designated to individual households.
- Privately-owned car parks to which the public has access, such as supermarkets, hotel car parks, and those at motorway service areas, and
- Charging points on public roads.

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Also covered:

Hydrogen Refuelling Points

Currently 15 located in the UK (July 2022)

and

Shoreside Electricity Supply for Seagoing Ships

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What's not covered?

The regulations do not consider chargepoints to be accessible to the public when they are intended to be used by people who fall into one of the four categories below:

- Occupiers of residential premises and their visitors
- People while at their place of work
- Exclusive use in respect of a vehicle produced by a specific car manufacturer
- People engaged in specific occupations

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Who is responsible for compliance with the regulations?

The regulations place requirements on any person or legal entity responsible as an owner or on behalf of a third party for the chargepoints. This could be a person who has a contract/lease with a public or private organisation to operate charge points on their land which is available for use by the general public, such as on local authority owned streets or in public car parks.

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How do you comply with the regulations?

The Regulations set out certain requirements for EV charge points related to:

- Technical standards
- Ad-hoc access
- Intelligent metering
- Data Accessibility

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Technical standards

The minimum connection standards are for chargepoints deployed or renewed after 17th November 2017 is:

AC Charging (3.8-22 kW)
(22kW+)

EN62196-2 Type 2
EN62196-2 Type 2



DC Charging (22kW+)

EN62196-3 Combo 2 (CCS)



Other connection standards such as Type 1 (Normal power AC Charging) and CHAdeMO (high power DC recharging points) may be used if the minimum connection standard is met on the chargepoint.

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Ad-hoc access

The regulations require that ad-hoc access must be made available for all chargepoints which are accessible to the public.

Ad-hoc access means that a customer can use a charge point without having to enter into a pre-existing contract or be subject to any ongoing financial commitment with the infrastructure operator or electricity supplier.

Ad-hoc is a minimum requirement and therefore it will be acceptable for operators to provide to customers non ad-hoc access provisions if they are available alongside an ad-hoc option.

Ad-hoc access may be offered in a variety of ways.

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Ad-hoc access

Ad-hoc access may include:

- ✓ Cash payment or Credit or debit card via chip and pin or contactless (at the recharging point or within close vicinity to the charge point)
- ✓ Online payment through a webpage browser or app that does not require registration such as a guest option as 'pay-as-you-go' or phone/SMS solution that does not require previous registration (Subject to phone signal and internet availability in the area)
- ✓ Acceptance of terms and conditions that apply only to that charging event or pre-authorisation of a credit/debit card to ensure the requisite funds exist for that charging event

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Ad-hoc access

Ad-hoc access does not include:

- Any method of access that requires registration/storage of personal information and/or credit/debit card details or which requires 'credit loading', or a minimum deposit/balance to be held by an infrastructure operator on behalf of a customer.
- An RFID/key fob required to be sent to the customer later than the time of use or an on-going subscription service which ties the customer into membership schemes to allow access to the charge points
- A one-off fee which lock money into a single online wallet, whereby the remaining balance cannot subsequently be used for later charging events or connection/operation/maintenance costs which are advertised as separate to the recharging cost and need to be paid prior to usage.

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Intelligent metering

The regulations require that intelligent metering systems must be incorporated into all charge points which are accessible to the public.

Intelligent metering systems record information about the energy consumption of the charge point and transmit this data about recharging events back to a central system.

This can enable customers to record information about their energy use and compare on a like-for-like basis.

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Intelligent metering

Infrastructure operators must let their customers know at the point when customers are recharging their vehicle how they can request information on the performance and the time of use.

Examples of Acceptable ways to provide information to customers:

- Web app (provided this is an immediate service)
- Email (provided this is an immediate service)
- SMS (provided this is an immediate service)
- Display screen on the recharging point which available at the time of charging

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Intelligent metering

The technical requirements for intelligent metering systems are the following:

- Ensure cyber security with regard to data sent from and to it, and in the operation of the recharging point
- The security of intelligent metering systems, including but not limited to data communication, and the privacy of customers, must be compliant with the Data Protection Act 2018 and GDPR
- Infrastructure operators must provide information to the customer regarding the time of use, duration of use and charging performance information, at the point they are recharging
- Information on performance (Energy consumption: maximum output of the recharging point in kW, and the amount of charge taken in kWh) and how this is being converted for billing purposes must be available to customers at the point when customers are recharging their vehicles.

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Data Accessibility

The regulations require that the geographic location data of publicly accessible charge points must be made available on an open and non-discriminatory basis. Infrastructure operators can choose how they provide this data.

Geographic location data accessibility means the data is published in a form that would provide those using the data with a precise location, and which would allow applications such as satellite navigation systems and route planners to direct customers to a precise location. It is optional to include longitudinal and latitudinal geographic coordinates and/or a full indicative postal address, which will usually only be an approximate location.

Open and non-discriminatory basis means that the data is freely available to anyone who wishes to access it (both public and business users for commercial use) without restriction.

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Who enforces the regulations?

The Regulations are enforced by the Office for Product Safety & Standards (OPSS), part of the Department for Business, Energy & Industrial Strategy, on behalf of the Office for Zero Emission Vehicles (OZEV).

Powers

- Power of Entry Without a Warrant
- Power of Entry With a Warrant
- Power of Inspection, Testing & Removal

Enforcement

- Periodic assessments and inspections,
- Risk-based identification of the project's scope,
- Stakeholder Engagement and Business Improvement Plans,
- Formal Inspections.



Enforcement Actions

OPSS will always seek to work with infrastructure operators to achieve compliance where possible. However, OPSS may use the following approaches to tackle non-compliance:

- Informal warnings
- Business Improvement Plans
- Compliance Notices
- Civil penalties*
- Publicity

*Any civil penalty received by the enforcement authority must be paid into the Consolidated Fund.

Table 22. Civil penalties			
Breach of Regulation	Type of standard in breach	Regulation summary	Civil penalty maximum
Regulation 3	Minimum Technical	Normal power recharging point	Up to £500 per recharging point
Regulation 3	Minimum Technical	High power recharging point	Up to £4,000 per recharging point
Regulation 3	Technical	Refuelling point	Up to £10,000 per refuelling point
Regulation 4	Technical	Shore-side electricity supply installation	Up to £300,000 per shore-side electricity supply installation
Regulation 5	Customer Experience	Intelligent metering system for recharging points	Up to £300 per recharging point
Regulation 5	Customer Experience	Ad-hoc access for recharging points	Up to £1,000 per recharging point
Regulation 6	Customer Experience	Geographic location data accessibility	Up to £100 per recharging point

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Where can you find further information?

To find further guidance, go to www.gov.uk/guidance/regulations-alternative-fuels-infrastructure