

Detailed guide: The Thames Barrier

Updated: New information added 8 October 2018.

The Thames Barrier is one of the largest movable flood barriers in the world. The Environment Agency runs and maintains the Thames Barrier as well as London's other flood defences.

You can follow us on Twitter [@AlanBarrierEA](#) or read our [gov.uk blog posts](#), or like our [Facebook page](#)



The Thames Barrier

Forthcoming scheduled closures

The Environment Agency operates the Thames Barrier every month for maintenance and testing. Once a year, they also test the barrier at a high spring tide (normally September or October). They may begin closing and re-opening the gates up to an hour before the times listed below.

- Thursday 11 October 2018 9:15am to 11:45am
- Tuesday 13 November 2018 9:35am to 12.05pm
- Thursday 13 December 2018 9:45am to 12:15pm
- Thursday 10 January 2019 9:05am to 11:35am
- Monday 11 February 2019 10:10am to 12:40pm

- Tuesday 12 March 2019 9:45am to 12:15pm
- Tuesday 9 April 2019 9:55am to 12:25pm

Very occasionally, the Environment Agency may need to change or cancel a closure at short notice. Please call the Thames Barrier to check: 020 8305 4188.

Forecasting closures

The Environment Agency receives information on potential tidal surges from weather satellites, oil rigs, weather ships and coastal stations. They can forecast dangerous conditions up to 36 hours in advance, and will close the barrier just after low tide, or about 4 hours before the peak of the incoming surge tide reaches the barrier.

They get information from a range of mathematical computer models that forecast expected sea and river levels. This is supplemented by data from the [Met Office](#) and real-time information provided by the [UK National Tidegauge Network](#). This hydrological and meteorological data is fed into the control room every minute from a wide network of tide, river, pressure and wind gauges.

The decision to close, or not, is based on a combination of 3 major factors:

- the height of the tide (usually a spring tide) measured at the Thames Estuary
- the height of the tidal surge, which naturally accompanies each tide
- the river flow entering the tidal Thames, measured as it passes over Teddington Weir

Find up-to-date data for river and sea levels at the [Thames Estuary](#) and [Teddington Weir](#).

The barrier has no individual trigger level for closure. The closing process is guided by a mathematical matrix that considers the river flow, tide and surge at the time. The final decision for closure lies with the Thames Barrier Duty Controller.

How the Thames Barrier works

The Thames Barrier spans 520 metres across the River Thames near Woolwich, and it protects 125 square kilometres of central London from flooding caused by tidal surges. It has 10 steel gates that can be raised into position across the River Thames. When raised, the main gates stand as high as a 5-storey building and as wide as the opening of Tower Bridge. Each main gate weighs 3,300 tonnes.

The barrier is closed under storm surge conditions to protect London from flooding from the sea. It may also be closed during periods of high flow over Teddington Weir to reduce the risk of river flooding in some areas of west London including Richmond and Twickenham.

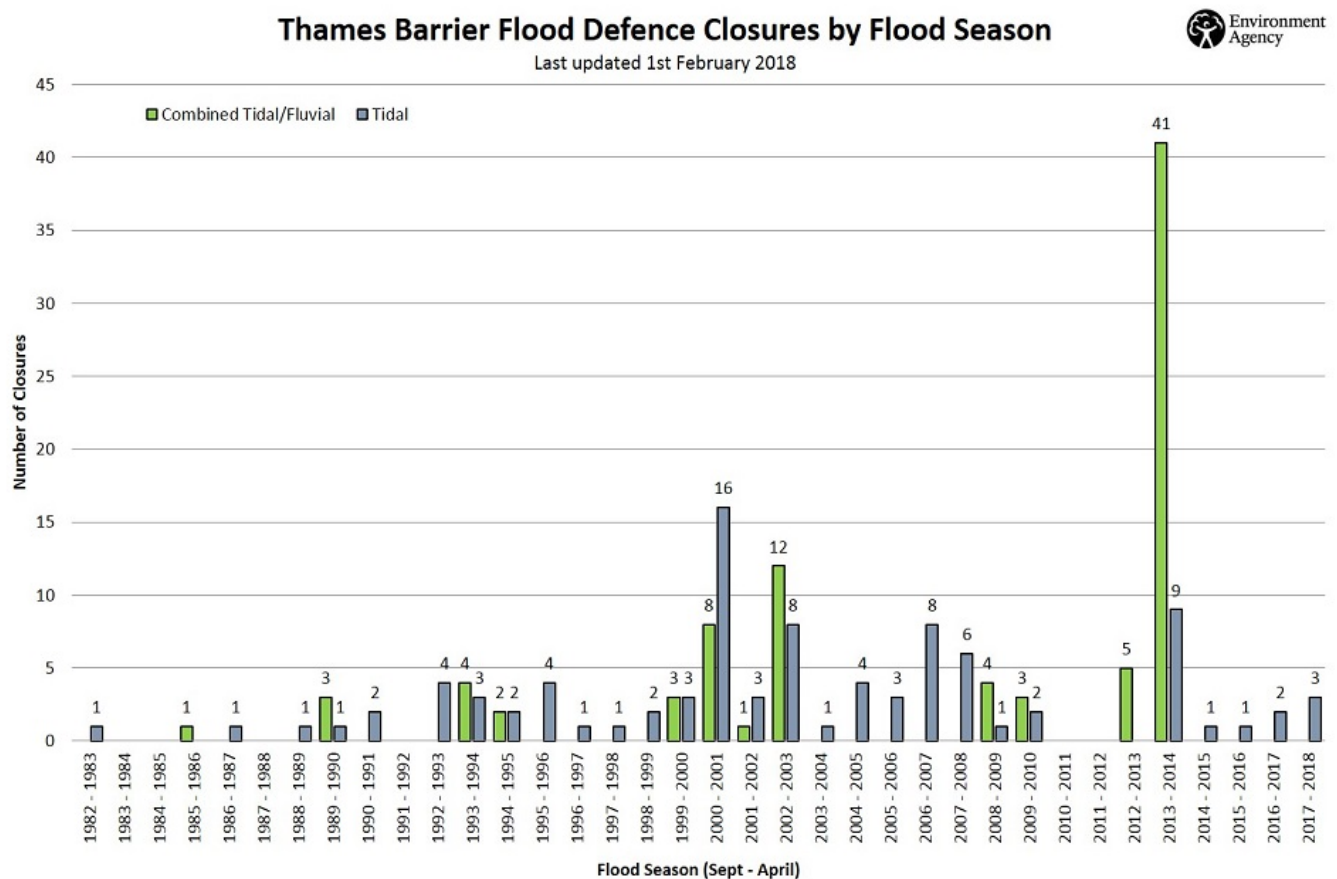
The Thames Barrier will then remain closed over high water until the water level downstream of the Thames Barrier has reduced to the same level as upstream. This is a managed process to provide for different circumstances, and takes about 5 hours. The Thames Barrier is then opened, allowing the water upstream to flow out to sea with the outward-bound tide.

You can watch a video that shows how the Thames Barrier works:

[a video of how the Thames Barrier works](#)

Thames Barrier closures

The Thames Barrier has been closed 182 times since it became operational in 1982 (correct as of February 2018). Of these closures, 95 were to protect against tidal flooding and 87 were to protect against combined tidal/fluviat flooding.



Thames Barrier closures since 1983 as of February 2018.

If you have an enquiry about the Thames Barrier, or would like to receive a project pack, email: kslenquiries@environment-agency.gov.uk.

The future of the Thames Barrier

The Thames Estuary 2100 plan sets out how flood risk will be managed in the Thames estuary to the end of the century and beyond. It also recommends what actions the Environment Agency and others will need to take in the short term (the next 25 years), medium term (the following 15 years) and long term (to

the end of the century).

The plan is based on current guidance on climate change, but is adaptable to changes in predictions for sea-level rise and climate change over the century.

More information can be found on the [Thames Estuary 2100 page](#) .

Visiting the Thames Barrier



Tripadvisor 2017 certificate of excellence



New Thames Barrier cafe and information centre

The centre has an additional conference room and improved outdoor seating area, which allows the Environment Agency to offer more availability for group talks and conferences. This new room has additional cover for winter group talks. For more Information call 0208 305 4188.

Thames Barrier price list

[Thames Barrier Information Centre price list 2018](#)

(PDF, 137KB, 1 page)

Thames Barrier conference rooms leaflet

[Thames Barrier conference rooms leaflet](#)

(PDF, 1.79MB, 2 pages)

The Environment Agency is currently upgrading the disabled lift, and the lift is out of service as of 4 September 2018 meaning there is restricted access to the Café. However, entrance to the Information Centre downstairs and toilets is still possible.

Please check opening times.

Date	Open	Last entrance to Information centre	Closed
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Thursday to Sunday, 3 September to 21 October 2018	10am 4:30pm	5pm
Monday to Sunday, 22 October to 28 October 2018	11am 3pm	3:30pm
Thursday to Sunday, 29 October to 3 April 2019	11am 3pm	3:30pm

- Please note that the Information Centre and Café will be closed on 18 October 2018 due to uninspected maintenance occurring on the roads around these facilities.

This webpage will be updated once the new lift is completed. The Environment Agency apologises for any inconvenience this may cause.

Group talks

Once a month you can pre-book onto guided tours at the Thames Barrier
[Booking form 2018](#)
(PDF, 151KB, 3 pages)

. Please note, due to security, there is no access onto the Thames Barrier structure itself. It is not suitable for children under the age of 5. This offer is not available to groups over 5 people.

You can now book a group tour with afternoon tea
[Thames Barrier group talk and afternoon tea 2018](#)
(PDF, 385KB, 1 page)

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On the first Sunday of each month you can pre-book onto a guided group talk.. Due to popular demand, there is the option to add a vintage cream tea to your group talk with no minimum numbers.

Guided group talk and entrance to the information centre only £6.50 PP
(approx one and half hours)

Guided group talk and cream tea £19.50pp (approx two and half hours)

Full payment is required in advance when you call to book your date. To book, email thamesbarrierenquiries@environment-agency.gov.uk or call on 0208 305 4188.

You can also arrange larger group visits (for more than 5 people) by filling in this
[Booking form 2018](#)
(PDF, 151KB, 3 pages)

and emailing it to thamesbarrierenquiries@environment-agency.gov.uk.

[Guidance: Salisbury Plain Training Area \(SPTA\) newsletter](#)

Updated: Salisbury Plain training area newsletter for August 2018 has been added.

This page contains the 2 latest editions of the Salisbury Plain Training Area (SPTA) newsletter, providing news and updates about current and planned activities concerning training and access on the plain.

Related information

- [Salisbury Plain Training Area \(SPTA\) firing times](#)
- [Salisbury Plain public information leaflet](#)
- [Public access to military area: Salisbury Plain](#)
- [The Defence Training Estate: south west including Salisbury Plain](#)
- [Low flying in your area](#)
- [Salisbury Plain \(Imber Range Perimeter Path\)](#)

[Detailed guide: EU ETS: monitoring and reporting](#)

Updated: The statutory reporting deadline for excluded installation emissions permit holders continues to be 31 March each year for the previous scheme year.

Timetable for monitoring and reporting

The statutory reporting and surrender deadlines have been revised for the scheme years according to UK legislation. The revised deadlines are:

- 2017: statutory reporting deadline 31 March 2018, statutory surrender deadline 30 April 2018
- 2018: statutory reporting deadline 11 March 2019, statutory surrender deadline 15 March 2019
- 2019: statutory reporting deadline 31 March 2020, statutory surrender deadline 30 April 2020
- 2020: statutory reporting deadline 31 March 2021, statutory surrender deadline 30 April 2021

The statutory reporting deadline for excluded installation emissions permit

holders continues to be 31 March each year for the previous scheme year.

On 1 January

Start monitoring your emissions for the current reporting year in accordance with your approved monitoring plan or emissions plan.

By 28 February

Regulators allocate free allowances to the Operator Holding Accounts (OHAs) and Aircraft Operator Holding Accounts (AOHAs) of eligible operators in the Union Registry.

By the statutory reporting deadline

Submit your [verified annual emissions report](#) for the previous reporting year to your regulator using [ETSWAP](#). For example, verified emissions for 1 January to 31 December 2017 should be reported by the 2018 statutory reporting deadline.

Enter your annual reportable emissions from the previous year into your OHA or AOHA in the Union Registry.

If you have used an accredited verifier they must then approve the emissions figure you have entered in the Union Registry.

In some circumstances you [do not need to use an accredited verifier](#).

If you do not have an obligation to report in a particular scheme year, you do not need to enter a zero emissions figure. For example, you would not have an obligation to report if:

- you are an excluded operator
- you have only carried out aviation activities outside the geographical scope of EU ETS (excluded aviation activities)
- all your flights were exempt

If you will no longer be excluded or exempt in future, for example because you have exceeded a minimum threshold, you must notify your regulator using [ETSWAP](#).

By the statutory surrender deadline

Surrender allowances equal to the value of your annual reportable emissions from your OHA or AOHA in the Union Registry.

By 30 June

Submit your [improvement report](#) if required. Excluded operators do not need to do this.

By 31 December

Notify your regulator of any changes to your monitoring or emissions plan, capacity, activity level or operations. Some changes need to be notified sooner, or before you make the change.

For more information about types of changes you need to tell your regulator about and the time frames for doing this see:

- [Notify your regulator about changes to your operations](#)
- [EU ETS Phase III: guidance for installations](#)
- [EU ETS Phase III: guidance for aircraft operators](#)

Use an accredited verifier

Before you submit your emissions report to your regulator, you must first use [ETSWAP](#) to submit the report to an accredited verifier for verification.

You must appoint a verifier that is accredited for the regulated activity you are reporting.

You can appoint a UK based verifier that is accredited by the [United Kingdom Accreditation Service](#). Their website provides information about verification in the UK.

Or, you can appoint a verifier accredited by the National Accreditation Body (NAB) in another EU country. You can find details of other NABs on the [European Accreditation](#) website.

You should appoint a verifier at least 9 months before you need to submit your report.

A verifier cannot prepare your emissions report. The verifier's role is to independently check the contents of your report and record their findings in a verification report. This forms part of the emissions report you submit to your regulator.

When you do not need an accredited verifier

If you are an excluded installation you can choose to [self-verify your emissions](#) rather than appoint an accredited verifier. However your regulator may decide to carry out a site audit.

You do not need to use an accredited verifier if you are an aircraft operator who emits less than 25,000 tonnes of CO₂ per year (based on the full scope of the EU ETS), and/or an aircraft operator emitting less than 3,000 tonnes of CO₂ per year (based on reduced scope aviation activities), and you're doing both of the following:

- estimating your emissions using the [Small Emitters Tool](#)
- populating the tool with unamended data from the [Eurocontrol Support Facility](#) (ETS-SF) that correctly reflects your reduced scope activities

If you use the [Small Emitters Tool](#) populated with your own flight data you will need to have your emissions report verified by an accredited verifier.

Checks your verifier will make

Your verifier will assess the monitoring methods, information, data and calculations you have used. In particular, they are checking:

- whether there are any omissions, misrepresentations or errors in your report
- that you have monitored and reported in accordance with your approved monitoring or emissions plan and the Monitoring and Reporting Regulation
- whether the procedures you used to support your monitoring are effective
- whether you can improve your monitoring

Receiving your verification report

After verifying your emissions report, your verifier will use ETSWAP to send you a verification report (VR) containing their verification opinion statement.

You must then use [ETSWAP](#) to submit your emissions report, with the VR, to your regulator.

Verifier site visits to installations

Your verifier needs to be able to gather information and evidence. You need to let them access your site so they can:

- assess the operation of measuring devices and monitoring systems
- conduct interviews

The site visit is also an opportunity for the verifier to assess whether you have correctly identified the boundaries of the site and whether there are any additional sources that should be included.

A site visit must be carried out by your verifier at least once every 3 years, or if:

- you have changed verification companies
- there have been major changes to your monitoring plan since 1 January 2013

In exceptional cases, and on the basis of a risk assessment, your verifier may decide that a site visited is not needed.

If this is the case, your regulator needs to approve a site visit waiver. You must submit your request for a site visit waiver to your regulator via email and include your verifier's risk assessment.

You need to submit your request by 30 September of the reporting year. This will allow enough time for your verifier to carry out a visit if your regulator refuses your request.

You do not need approval from your regulator for a site visit waiver if your installation:

- emits less than 25,000 tonnes of CO₂ per year
- is an excluded installation

In these cases, your verifier must still justify their reasons for not visiting your installation.

Verifier site visits to aircraft operators

Your verifier needs to be able to gather information and evidence. If their risk assessment identifies that a visit to an aircraft or aerodrome is required, you must provide them with access, for example, to conduct interviews.

Access to a computer based, centralised database is also considered a site visit for aircraft operators. In this instance, you may only need to provide your verifier with access to where you hold and store your monitoring data and relevant information.

If you are a small emitter and you have used the [Small Emitter Tool](#), your verifier may decide that a site visit is not necessary. The decision must be based on your verifier's risk assessment.

Site visit waivers for aircraft operators do not require approval from your regulator.

Verification: excluded installations

Excluded installations can choose to either:

- appoint an accredited verifier to verify their annual emissions report
- self-verify their emissions report and have it audited by their regulator

In all cases you must submit your emissions report using [ETSWAP](#) by 31 March.

As part of self-verification, you need to submit a notice to confirm that:

- you have complied with the Monitoring and Reporting Regulation and with your monitoring plan
- your report does not contain any major errors or 'material misstatements'

You need to make sure you have internal assurance systems in place to check your report is accurate. You must also keep records of all relevant data and information to support your reporting.

Your regulator will do a risk assessment of your report. If needed, they will ask you to provide more information for the audit.

Regulator audits are risk based and they will aim to audit each excluded installation at least twice during EU ETS phase III.

Regulators will audit higher risk excluded installations more frequently and they will audit all of those that emit more than 20,000 tonnes of CO₂ per year.

Verification: aircraft operators emitting less than 25,000 tonnes of CO₂ per year (based on full scope emissions) and/or aircraft operators emitting less than 3,000 tonnes of CO₂ per year (based on reduced scope aviation activities)

If you are an aircraft operator within one of these categories you can either:

- appoint an accredited verifier to verify your annual emissions report
- report your emissions using the ETS-SF which estimates emissions using the [Small Emitters Tool](#)

If you use unamended Eurocontrol data from the ETS-SF to populate the Small Emitters Tool, you do not need to have your emissions report independently verified.

It is your responsibility to check the ETS-SF data for completeness using your own internal flight records. Ensure any errors are corrected by Eurocontrol.

If you use the Small Emitters Tool with your own flight data, you will need to have your emissions report verified by an accredited verifier.

In all cases you need to submit your emissions report using [ETSWAP](#) by the statutory reporting deadline.

Your regulator will audit your report and if necessary will ask you to provide more information.

Submit your emissions report

On 1 January each year you will receive an email telling you that a 'Complete your emissions report' task has been placed in your ETSWAP account work queue.

Aircraft operators who were exempt in previous scheme years will not have this task in their work queue unless they had notified their regulator before 1 January that they are no longer exempt. If this applies to you, contact your regulator as soon as possible so they can put the task in your ETSWAP account work queue.

ETSWAP will send out email reminders at regular intervals to all operators

that have not yet submitted their verified emissions report.

Help pages within ETSWAP provide guidance on how to submit your emissions report to your regulator after it has been verified.

Login to [ETSWAP](#).

More guidance on reporting your emissions:

- [EU ETS Phase III: guidance for installations](#)
- [EU ETS Phase III: guidance for aircraft operators](#)
- [Monitoring, reporting and verification of EU ETS emissions](#)

Aircraft operators: no activity to report

You do not need to monitor your emissions or submit a verified report if you have:

- not carried out an Annex 1 activity during the scheme year
- only carried out excluded aviation activities

However you do need to notify your regulator about your circumstances if either of these apply to you. You do this by completing the section of the emissions report form in [ETSWAP](#) that states you have not performed an Annex 1 activity during the reporting year. You then submit the report form to your regulator.

Report the use of bioliquids and biofuels

The Monitoring and Reporting Regulation states that if you are reporting an emission factor of zero in respect of the use of bioliquids or biofuels, you must satisfy your regulator that the sustainability criteria set out in Article 17 (2) to (5) of the Renewable Energy Directive (2009/28/EC) have been fulfilled.

This requirement also applies to excluded installations.

Appendix 3 of the document [EU ETS Phase III: guidance for installations](#) has more information on how to report the use of bioliquids.

The [EC guidance document 3: biomass issues in the EU ETS](#) has more information on the use of solid biomass.

Record keeping

You must keep records of all relevant data and information to support your emissions reporting for at least 10 years. Regulators will carry out periodic reviews of installation and aircraft operators and will ask to see supporting data as part of the audit. Verifiers will check this requirement is met as part of their verification.

Improvement reports

To comply with the Monitoring and Reporting Regulation, you need to regularly check whether you can improve the way you monitor your emissions.

In some instances you need to tell your regulator how you are going to make improvements to your monitoring. You need to submit an improvement report using [ETSWAP](#).

Not using the highest required tier for your monitoring

You need to submit an improvement report to your regulator explaining why. You also need to state how you will make improvements that will enable you to move towards using the highest tier in future.

Using a fallback approach for a major or minor source stream

You need to submit an improvement report to your regulator justifying why you cannot apply at least tier 1. You also need to explain how you will make improvements in future that will enable you to use tier 1.

In both of these examples, if you are not proposing any improvements, you need to explain why this is either not technically feasible, or would lead to unreasonably high costs.

The deadlines for submitting these improvement reports are:

- Category A installations – by 30 June every 4 years
- Category B installations – by 30 June every 2 years
- Category C installations – by 30 June every year

ETSWAP will automatically generate a task for submitting an improvement report if you have completed certain sections in your annual emissions report.

Verifier recommended improvement reports

You need to submit this type of improvement report if your verifier has identified non-conformities in your emissions report, or is recommending improvements. Non-conformities usually mean that you have not complied with your monitoring plan or reporting requirements.

Verifier recommended improvement reports apply to both installation and aircraft operators.

It is your responsibility to understand and comply with the requirements relating to improvement reports.

If you [do not need to use an accredited verifier](#) but have chosen to, you will need to submit an improvement report if the verifier identifies any non-conformities. However, in these circumstances, you would not need to submit an improvement report for recommended improvements. But you should still

consider the improvements your verifier recommends.

A task called 'Update verifier improvement report' will automatically be placed in your ETSWAP work queue if the emissions report you submitted contains a non-conformity or improvement identified by your verifier.

You need to submit a verifier recommended improvement report by 30 June. In the report, you need to describe how and when you will address the issues identified by your verifier.

If you believe that the improvements recommended would not improve your monitoring methodology, or would be unreasonably expensive, you must provide the reasons why and evidence to support this in the improvement report.

Enter your emissions into the Union Registry

You must enter your emission figure for the previous monitoring scheme year into your OHA or AOHA in the Union Registry by the statutory reporting deadline.

Your verifier also needs to login to the Union Registry to confirm your emissions are correct and match the figure submitted through ETSWAP. This has to be done by the statutory reporting deadline. Enter your figure into the Union Registry several days before the deadline to allow your verifier time to confirm your emissions.

If you have not entered your emissions, and had them verified, in the Union Registry by the statutory reporting deadline, your account will be blocked. This applies even if you had zero emissions to report. A blocked account means you will not be able to:

- transfer allowances to another account
- exchange eligible Kyoto Units for allowances

You will still be able to receive allowances into your blocked account and surrender them.

Your account will automatically unblock once you have entered your emissions and they have been verified.

If you are an aircraft operator who has reported using data from the ETS-SF, without the need for verification, you must remove your verifier from your AOHA. Otherwise they will receive an automatic message asking them to confirm the emissions figure you have proposed. The regulator will confirm your proposed emissions in your AOHA if it matches your reported emissions.

Once your annual reportable emissions figure has been verified, you must surrender allowances equal to your annual reportable emissions figure by the statutory surrender deadline. This figure will include any surrender deficit which has accrued since 1 January 2013, including any deficit due to a retrospective correction of emissions. See [EU ETS: allowances](#) for more information.

Excluded operators do not need to enter their emissions into the Union Registry or surrender allowances to cover their emissions. Instead, they need to meet their emissions targets.

Login to the [Union Registry](#).

Excluded installations: annual emissions targets

If you are an excluded installation you have to meet an annual emissions target. These targets are listed in your permit.

If your emissions are higher than your target, you will receive a civil penalty. You will have to pay a cost per tonne of CO₂ you have emitted over your target. The cost will be set in line with the market price of carbon.

If your annual emissions are lower than your target, you will bank the over achievement for the next compliance year.

Your regulator will amend and re-issue your excluded installation permit to reflect the over achievement.

Enforcement and penalties for non-compliance

You must comply with EU ETS regulations and your emissions permit or emissions plan. The Environment Agency may impose civil penalties if you:

- carry out a regulated activity without a permit
- monitor your emissions incorrectly
- fail to submit a verified annual emissions report by the deadline
- under-report your emissions
- surrender insufficient allowances to cover your emissions

You must submit your verified annual emissions report on time or your regulator may determine your annual reportable emissions for you. They may charge you for their time.

See a list of civil penalties imposed by the Environment Agency on data.gov.uk.

More information about the Environment Agency's approach to EU ETS enforcement and penalties is in annex 2, section B of the [Enforcement and Sanctions policy](#).

Help

These guidance documents have more information on requirements for EU ETS:

- [EU ETS Phase III: guidance for installations](#)
- [EU ETS Phase III: guidance for aircraft operators](#)

The European Commission has also produced guidance for operators:

- [The Monitoring and Reporting Regulation: general guidance for installations](#)
- [The Monitoring and Reporting Regulation: general guidance for aircraft operators](#)
- [The Accreditation and Verification Regulation: general guidance on verification](#)

For help with Union Registry queries email etregistryhelp@environment-agency.gov.uk.

For other EU ETS queries contact your regulator:

Environment Agency

Installations email: ethelp@environment-agency.gov.uk

Aircraft operators email: etaviationhelp@environment-agency.gov.uk

Department for Business, Energy and Industrial Strategy – Offshore Petroleum Regulator for Environment and Decommissioning (BEIS – OPRED)

Email: emt@beis.gov.uk

Scottish Environment Protection Agency

Email: emission.trading@sepa.org.uk

Natural Resources Wales

Email: ghghelp@naturalresourceswales.gov.uk

Northern Ireland – The Department of Agriculture, Environment and Rural Affairs (DAERA)

Email: emissions.trading@daera-ni.gov.uk

National Statistics: Monthly feed-in tariff commissioned installations

Updated: June 2018 FiTs deployment statistics published.

Statistics presented in the monthly table show the number of installations and capacity installed, broken down by technology type. These schemes have been registered on the Microgeneration Certification Scheme – MCS

Installation Database or accredited through the R00FiT scheme. Not all the schemes in the table below will have completed registration for a Feed-in tariff, there is no guarantee that all installations will be eligible for or decide to apply for the FITs.

As of 25 January, this table will be updated on a quarterly basis (but retaining a monthly time-series).

Contacts

Press enquiries should be directed to the BEIS press office:

Tel: 020 7215 1861 / 020 7215 8930.

For enquiries concerning these tables either email fitstatistics@beis.gov.uk or contact:

Helene Clark
Tel: 020 7215 1259

[Collection: COMEAP: reports and statements](#)

Updated: Added 'Air pollution and cardiovascular disease: mechanistic evidence' to the reports section.

The Committee on the Medical Effects of Air Pollutants (COMEAP) advises on all matters concerning the health effects of air pollutants.