



Tracking the skies with...



**ETS AVIATION FOOTPRINTER™**



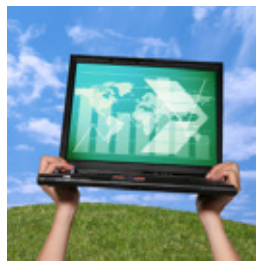
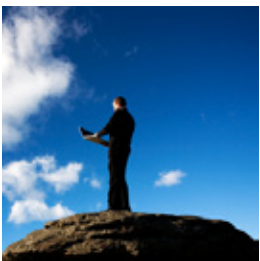
**ETS AVIATION**

[www.etsaviation.com](http://www.etsaviation.com)



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# Looking at the big picture

It's going to be a tough decade for the aviation industry. To thrive, or just survive, operators will need to get many things right – including their ETS monitoring.

The new European Union Emissions Trading Scheme [ETS] regulations are a challenge for any operator. The stakes are high. Having an eye for detail will be imperative. Flight data must be recorded, reported and verified as accurately as possible. Even 1% of inaccuracy could be very costly.



## Your ETS needs

With the highest levels of confidentiality, the system must store flight and fuel data related to ETS requirements for calculating the carbon emissions. Passenger or pilots names need not be included in the data field requirements.

The **ETS AVIATION FOOTPRINTER™** system is custom-made for this job.

### It's crucial to make the right choice... and to make it now!

Making the right choice for your ETS monitoring is vital. Some operators are looking at developing or modifying an internal system. But the investment, hassle and potential pitfalls of taking this view shouldn't be underestimated. As you'll see over the page, inaccurate emissions reporting could also have some serious financial implications.

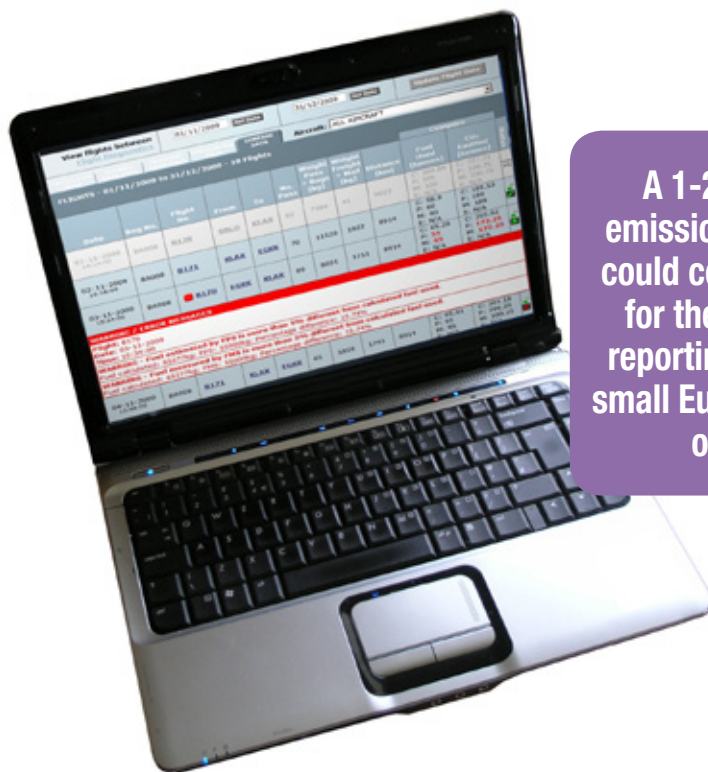
Time is a pressing factor too. Operators affected by the impending EU Emissions Trading Scheme regulations must submit their first emissions and TK reports by the end of 2010. Operators, applying for free CO2 certificates via the TK report only have one chance to get it right. Getting it wrong could result in significant losses of carbon credits from 2012 to 2020 – and even heavy fines. For those who get it right, there are substantial allocations of free carbon certificates available: up to 80% of the 2010 flight activity reported in the Tonne Kilometer report.

# The cost of getting it wrong

Inaccuracies or errors in monitoring emissions data could result in overpayment of emission charges and under allocation of carbon credits.

The average cost of European Union Allowances (EUAs) is estimated to be upwards of €30 per tonne of Co2 or about €100 per flight hour for a business jet and €300 for a medium sized airliner.

Even a small airline of 6 aircraft emitting 150,000 tonnes of Co2 per year with annual emissions estimated at €4.5M could lose upwards of €1M over the reporting cycle for a 1%-2% error in monitoring emissions data or claiming free carbon certificates. Errors in emissions reporting can lead to further fines and penalties as well as additional auditing expenses with the verifier.



**A 1-2% error in emission monitoring could cost up to €1M for the 2012-2020 reporting cycle for a small European airline operator**

## An eye for detail is critical

ETS accuracy is critical to small and large operators alike. Developing in-house systems is expensive, requires constant administrative support and is usually a “quick fix” rather than a well-constructed, purpose-built tool.

Operators need a low cost, effective and, above all, highly accurate system for recording and managing their flight data. The smartest solution on the market is **ETS AVIATION FOOTPRINTER™**.



# ETS AVIATION FOOTPRINTER™

Ready now, with an eye on the future.

## Taking a closer look at ETS AVIATION FOOTPRINTER™



### MINIMISE LOSS - MAXIMISE GAINS

ETS AVIATION FOOTPRINTER™ is a simple-to-use, cost-effective and highly accurate carbon accountancy system designed exclusively for the aviation industry.

### THE SMARTER SOLUTION

Creating or modifying an in-house system means significant investments in time, money and manpower. It also means dealing with system glitches and data inconsistencies, wading through regulations and preparing your annual Emissions report, TK report and Verification audit. ETS AVIATION FOOTPRINTER™ does all this for you.

### ACCURACY! ACCURACY! ACCURACY!

ETS AVIATION FOOTPRINTER™ is designed to flag any data gaps and inconsistencies. And, remember, failure to spot errors could result in overpayment of emission charges, under allocation of carbon credits and even fines.

### EFFICIENT AND FUTURE PROOF

ETS AVIATION FOOTPRINTER™ is web based and compatible with your existing software and data housing systems. It hosts your ETS data on a remotely accessible, highly secure, dedicated data-base. It's easy to manage from anywhere in the world, 24/7. So, for example, Verifiers can examine all your flight data without the need for costly on-site visits.

### TIME-SAVING

ETS AVIATION FOOTPRINTER™ simplifies the entire process of report preparation and streamlines the auditing process for you: it's an almost self auditing system, which will flag the errors, making them easy to spot and easy to fix. It delivers clear presentation of data and mind-boggling accuracy – giving you highly efficient, cost-effective management of your ETS data at the click of a mouse. And it's the only system designed to meet the needs of the verifier, operator and regulator.

#### ETS AVIATION FOOTPRINTER™

saves you time and money:

- In building or modifying your own system.
- Training or allocating staff
- Administering and auditing an internal ETS system.
- Searching for and fixing data gaps.
- Preparing the Emissions and TK report.
- Preparing and hosting the audit and Verification costs.

#### Greater ETS accuracy will avoid:

- Overpayment of emissions charges.
- Under allocation of Carbon Credits.
- Fines and penalties.
- Additional verification costs.



ETS Aviation Ltd is a member of the British Standards Institution (BSI) Associate Consultant Programme



# ETS Aviation Ltd

a company with vision

ETS Aviation Ltd was established to simplify emissions reporting and maximise the efficiencies inherent in specially developed software to reduce the administrative burden placed on both large and small operators. ETS Aviation's consultants and partners have expertise in aviation operations, cutting-edge software development and sustainability. This combination is unique and makes ETS Aviation a potent and cost-effective service provider to the aviation industry. The company is recognised as a leading innovator through its development of the world's first online aviation emissions monitoring and reporting system, **ETS AVIATION FOOTPRINTER™**.

ETS Aviation Ltd has unrivalled expertise in Carbon Accountancy and aviation. We have helped nearly 100 companies in the Aviation sector with practical guidance on EU ETS. We are partnered with industry leading organisations in the sustainability field and supported by a highly experienced software development team. Find out more about us by visiting <http://www.etsaviation.com>.

## Seeing is believing

ETS Aviation has developed **ETS AVIATION FOOTPRINTER™** to be the best, easiest to use and most cost effective Aviation Carbon Accountancy Solution available. Put us to the test.

## ETS AVIATION FOOTPRINTER™

### top-line product description

**ETS AVIATION FOOTPRINTER™** utilises web-based software designed exclusively for the aviation industry. It simplifies monitoring, reporting, verification and CO2 analysis.

**ETS AVIATION FOOTPRINTER™** is a stand-alone total ETS data management system application for storing aviation company data, fleet and flight data to create annual emissions reports compliant with EU regulations. No special equipment is needed to run **ETS AVIATION FOOTPRINTER™** – it runs via the user's browser. The system is tested under Internet Explorer 6 and above, Firefox 3 and above and Google Chrome 3 and above. The data input is an easy job through multiple options to suit each operator's data recording systems. Automatic uploads with seamless connections to existing flight management software systems. Excel bulk data uploads as well as manual inputs are all available.

Let **ETS AVIATION FOOTPRINTER™** track the skies for you and save money, time and hassle.

# Testimonials

what others see in **ETS ETS AVIATION FOOTPRINTER™**



“We found ETS AVIATION FOOTPRINTER™ to be not only best in class, but incredible value. One of the key upsides of the system is its inbuilt cross-check logic which irons out most mistakes in input data or at least flags them for corrective action, plus, the production of an annual report which can be audited and submitted with the simple click of a mouse. Since the software tool is web based it is easily accessible, which makes it easier to specify and verify. The ETS AVIATION FOOTPRINTER™ system is custom designed for the job and has a full suite of verification functionality specifically designed to help the EU-accredited Verifier. This in turn will ensure the highest accuracy in the Annual Emissions and Tonnes-Kilometer Reports”

***Mr. Gerold Tumulka,  
Director of Ground Operations at Air Seychelles***



“The addition of ETS Aviation’s specialist knowledge of the aviation industry will add real value to our Associate Consultant Programme and we are happy to be working with them.”

***Andrew Morris,  
Business Development Director, BSI***



“We realised that the process of collecting this information & converting it into the required format was an unrealistic burden to place upon individual airlines. Consequently, we have modified the Fuel Monitoring component of our Flight Data Monitoring (FDM/FOQA) system so that it can collect & store the required information automatically. More importantly, we have also introduced new functionality so that this information can be submitted to ETS AVIATION FOOTPRINTER. The savings for each operator will amount to several weeks of effort per year and they will also be spared from having to develop their own, in-house software solutions to meet the ETS requirements. For Aerobytes users, this new feature comes at no extra cost – it will be included with our standard product upgrades.”

***Eddie Forrester,  
MD, Aerobytes***



“A great solution, which passed its trial with flying colours. Additionally its versatility of accepting uploads as well as manual inputs suits Eurocyprias needs very well.”

***Captain Tony Economides,  
Ground Operations Manager, Eurocypria***

# Taking a closer look at functionality

## Captures All Data Needed for Annual Emissions Planning and Reporting

- Operator details
- Fleet details
- Flight Details

## Database Holds Over 30,000 Airports Worldwide

- System differentiates between EU and non-EU airports
- Calculation of great circle distance to WGS 84 standard

## Database Holds Over 9,000 Aircraft

- ICAO codes included in aircraft records
- Aircraft easily added to operator's fleet from aircraft data

## Flight Data Captured, Uploaded or Transferred

- Data entry via web form
- Bulk data entry via file import
- Bulk data entry via web service, bypassing system interface

## System Warns Where Data Appears Incorrect or Inconsistent

- Fuel usage appears too high or too low
- Data missing or in incompatible format
- Comparison with similar data shows discrepancy
- Break in city pair link
- Differences between calculated fuel and estimated or measured

## Analysis of Carbon Emissions

- By flight
- By aircraft type
- By tonne-kilometre-mile
- Efficiency calculations

## Cost of Allowances

- Link to EU cost of Carbon
- Projected carbon cost exposure

## Emissions Report Generation

- Interim / final report
- Emissions / tonne-kilometre-mile
- XLS / XML format

## Verifier / Auditor Views

- Special views into data by verifier
- Audited flight lock facility
- Verifier requests sent to operator's system administrator
- Flight Document random selection and upload facility

## Options

- Lease in/ out flights
- Down load CSV copy for office back up
- Un-chain all flights
- Upload MRV's and procedure changes

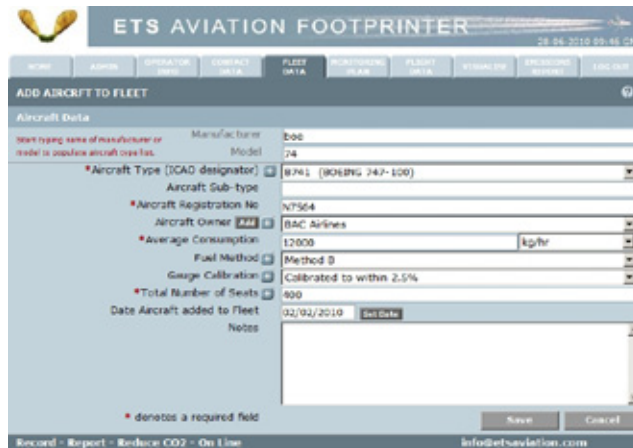
## System Architecture

- Secure internet access
- Each operator has separate database
- Login to system controlled by operator's system administrator
- Automatic daily data backups



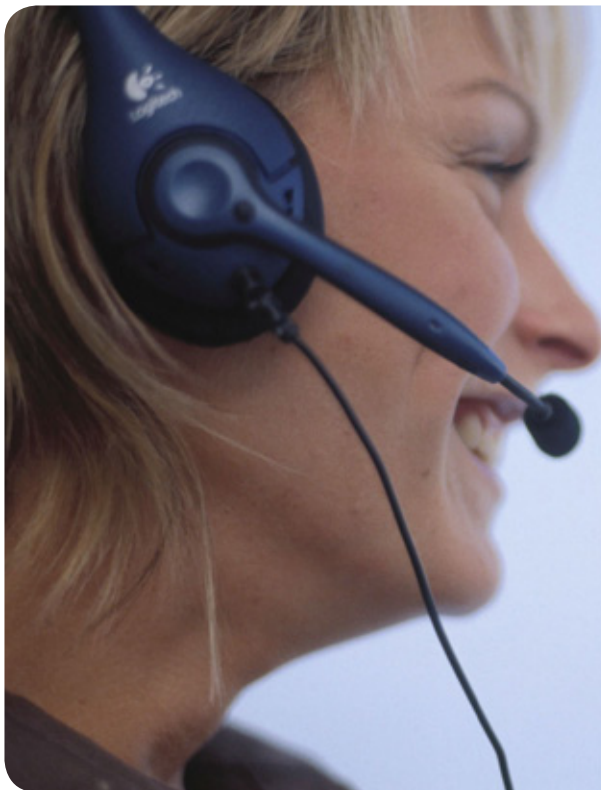
# Security

The data is safe and secure



The screenshot shows the 'ETS AVIATION FOOTPRINTER' software interface. The main window is titled 'ADD AIRCRAFT TO FLEET'. It contains a form for entering aircraft data. The form fields include: Manufacturer (Boeing), Model (747), Aircraft Type (Boeing 747-100), Aircraft Sub-type, Aircraft Registration No (N7504), Aircraft Owner (BAC Airlines), Average Consumption (17000 kg/hr), Fuel Method (Method B), Gauge Calibration (Calibrated to within 2.5%), Total Number of Seats (600), and Date Aircraft added to Fleet (02/04/2010). There is a 'Notes' field at the bottom. The interface also shows a navigation menu at the top with options like HOME, ADMIN, OPERATOR, CONTACT, FLEET, PORTFOLIO, FLIGHT, SYSTEM, PRESSION, and LOGOUT. The status bar at the bottom indicates 'Record - Report - Reduce CO2 - On Line' and 'info@etsaviation.com'.

Your security and confidentiality are a priority. **ETS AVIATION FOOTPRINTER™** is accessed via a secure (SSL) web site. All data is encrypted using 1024-bit encryption key in the communication between browser and server. Operators using the system are allocated their own database where their operational, fleet and flight data is held. The separate databases ensure that the data is only accessible by those with a valid login to that particular database. The operator's system administrator manages logins.



## Client and Technical Support

**ETS AVIATION FOOTPRINTER™** is supported by an independent service centre and operates on a 24 hours response to email enquires. Phone support is available during normal UK working hours.

# ETS Support Service (optional)

Think of us as your personal ETS department.

**ETS AVIATION FOOTPRINTER™** is a powerful software tool, and it can be backed up with our optional ETS Support Service (additional service). We have a team of aviation professionals, expert in EU ETS and on call to assist you every step of the way. In essence, your own personalised remote ETS Department. We have the expertise to handle all your administration, data management and support you in the verification process. We can act as a first auditing service to check for completeness and accuracy of your ETS data. So you won't miss deadlines or lose out on FREE carbon credits.



We're familiar with EU regulations, the complexities of aviation and the verification requirements.

Your ETS Support Service is accessible by a simple low-cost yearly subscription package that includes a highly effective system combining customised consultancy with easy access to expertise and regular administrative on-line support. We can help you with all your reporting, monitoring and verification obligations. Including:

- General administrative support for meeting EU ETS requirements including handling email and phone enquiries from relevant authorities.
- Template or full on line access to an IT system to Record ETS data
- Weekly, monthly or quarterly ETS Flight data uploads
- Cross checks and spot audits of Flight data
- Up to 10% sample audits against Flight documentation
- Gap analysis of CO2 reports from Eurocontrol / approved sources of simplified reporting emissions data.
- Preparation assistance of the Annual Emissions Report (AER) and TK Report (TKR)
- Pre Verification Services
- Verification Bridging, linking your ETS data to the verifier via a dedicated ETS database designed to assist verifiers with remote flight data auditing.
- Assistance with Verification Body and price negotiation



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