

Being Green doesn't mean Going Bankrupt!

Effectively Managing Your EU ETS Compliance Requirements

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This Paper is intended to achieve 4 outcomes.

1. The first is to help you to understand how the EU Emissions Trading Scheme (ETS) may have an impact on your airline, from a cost perspective and potentially from an operational perspective.
2. The second is to make sure you place sufficient value on the quality and convenience of the procedures you will be implementing to monitor your emissions (they have got to be right for you and they have got to be easy for your staff).
3. The third is to let you know about the potential size of the costs you could be facing because you are a part of the EU ETS (because when you see those numbers, that ought to make you pay a bit more attention)
4. And fourth and last, having made sure you are stressed about the ETS, we offer you some rays of light – some hope that it won't be all that bad. That is, if you manage your ETS Compliance requirements properly.

NB: There will be more and more Emission Trading Schemes around the world as time goes on. The terms may change and some of the detail, but our view is they will all stick reasonably closely to the EU ETS, as they all need to be able to fit together at some point in the future. The information contained within this Paper may also be relevant to other Emission Trading Schemes.

We have framed this Paper in the belief that most airlines will have commenced, or even completed, their Annual Emissions and Tonne Kilometre Monitoring Plans. If this is not the case, and you need some help please call me (Dennis) on +61403586111 or email me at dennis.mcmahon@claerospace.com

The Risks You Face

The primary risks you face with the EU ETS are:

1. Compliance risks – if you don't comply with the various facets of the ETS (submission dates, surrender dates, failure of verification, etc), you may face significant financial penalties imposed by the EU, your EU member state or Competent Authority, or both
2. Financial exposure risk – you will have some financial exposure no matter how well you manage your EU ETS requirements; managed incorrectly, or not managed at all, may increase that financial exposure dramatically
3. Market share risk – how you manage the potential cost increases that the ETS may impose on your business (whether through internal cost cutting, margin shrinkage or cost pass through) may cause you to lose market share, depending on your market and how well your competitors manage their ETS requirements

Background

What is it for?

The whole intent of the ETS is to cause “behaviour modification”. If organisations like yours, (or even individuals), feel enough economic pain because you aren't reducing your emissions sufficiently or managing your compliance requirements effectively, you will be motivated to take some action to remove or reduce that pain. If you aren't feeling pain to the level of discomfort that makes you want to act, then you probably won't act, or certainly won't act as quickly or decisively

How does the EU establish how many emissions are allowed?

The EU ETS has a process to set what is called the “cap”, which is the maximum allowable tonnes of CO₂ which an industry, sector, a country or the whole economy may emit in any given year.

To calculate the cap, the EU nominates a certain “baseline year”, establishes the number of emission tonnes for that year and then sets the cap, usually at a level that is less than the baseline year emissions.

For aviation operating in EU airspace, the EU is compiling data from Euro Control for the 3 years 2004 – 2006. They will then determine the average of those 3 years which will form the baseline quantity.

We understand the baseline year emissions are 216,608,927 tonnes of CO₂. The cap will be 97% of this baseline quantity, so approximately 209.5M tonnes.

So that the industry can “learn by doing” the EU has decided to commence the aviation component of the ETS by way of a 2 year “dry run” period. During this period (calendar years 2010 and 2011), airlines will be required to implement and follow data collection procedures, such that each airline can demonstrate they can accurately record and manage the own emission levels.

It will be exactly like being in fully compliant mode, except that airlines won't have to surrender allowances until 2013 (after the 2012 first real commitment and reporting year).

How does the ETS work?

When you are into your commitment (i.e. real) reporting periods, you may be given some free allowances at the start of the reporting period, which will only ever be a proportion of your actual emissions.

How many free allowances you get depends on how many tonne kilometres you report for 2010. The total tonne kilometres reported by all airlines will be used to share out the free allowances. NB: This assumes that you decided to submit a Tonne Kilometre Monitoring Plan by 31 August 2009. The higher your proportion of emissions against the total number of emissions reported by those airlines who submit the Tonne Kilometre report, the more free allowances you receive. (You will see what we mean in the case study tables).

Please note – if you haven't finalised your EU ETS Monitoring Plans yet, we can help you with those. We are offering a free Monitoring Plan preparation service, for airlines who agree to implement our Greenflight Carbon Offset Programme. For more information, go to www.greenairclub.com or call Dennis on +61403586111.

At the end of the reporting period, you will prepare and submit your Annual Emissions Report which you will have to get verified by an accredited external verifier. The verifier then (provided the verifier is satisfied with your Annual Report) accepts your Report, and you submit your Report to your Competent Authority.

The Competent Authority then advises you of the number of allowances you are to surrender by the surrender date. The free allowances granted at the start of the year will not be enough to cover the required surrender amount, so you will have to acquire the difference between the free allowances and you required surrender number.

These can come from one of 4 sources:

1. General European Allowance Units (EUAs) which come from the broader EU businesses already involved in the ETS
2. EUAs from the specific aviation pool to be allocated by the EU
3. For the first reporting year (2012), you may source up to 15% of your emission total from UN / Kyoto Protocol CERs (Certified Emission Reduction units) or
4. ERUs (Emission Reduction Units).

After the first year, this currently decreases to 1.5%, but this may change over time.

Within the aviation pool, 3% of the capped amount will be set aside for new entrants and fast growth companies, 15% will be auctioned (only to airlines) and 82% will be provided free to airlines. The % of free allowances will reduce over time, until there is 100% auctioning of units. This time frame is not known but the EU will advise as they decide.

What will complying with the ETS do to my airline?

Other than imposing another cost to your operations, the ETS may have no significant impact. You will continue to fly, there will be some extra processes to be followed in one or more departments, and you will fund the allowances you need to surrender at the required time.

On the other hand, depending on your circumstances, it may have significant costs PLUS a major impact on how you operate your business. Some examples of operational changes may include:

- Changing your airport stopovers
- Reducing your capacity
- Implementing new flying techniques
- Implementing new apron techniques

Measuring and Managing your Emissions

Please note that it is vital for the success of any Carbon Trading Strategy to have systems in place that provide you with up to date information at any time, as to your current exposure. If you aren't sure whether your existing systems can provide you with this information, we have a number of Carbon Emission Management Systems that we can provide to suit your needs.

For more information, go to www.greenairclub.com and click on the Powerpoint for the CEM systems example or call Dennis on +61403586111.

Show me the money!!!!

When we thought about how best to explain the potential financial impacts to airlines, we considered a number of options. Finally we decided to construct a virtual case study, based on 11 airlines and the actual cap number that we believe the EU will use for aviation.

So on the next page, you will see a table showing the impacts on 11 airlines as though they were the only airlines who were involved in the EU ETS. The quantity of emission numbers we used were:

- Baseline year emissions – 216,608,927 tonnes CO₂
- Cap = 97% of Baseline year – 210,110,659 tonnes CO₂
- Reserve for new entrants 3% of cap - 6,303,320 tonnes CO₂
- Allowances for Auction 15% of cap - 31,516,599 tonnes CO₂
- Free allowances 82% of cap - 172,290,741 tonnes CO₂
- Projected 2010 emissions (approx. 10% increase) – 238,500,000 tonnes CO₂

Airline	2010 Emissions (assumes 10% increase on baseline year emissions)	% of total emissions for 2010	Tonnes of Free Allowances (assumes 2012 emissions are as per 2010 emissions) and that proportion of free allowances is same as proportion of emissions generated (NB: TK reports will vary proportions)	Allowances required to be acquired for surrender for 2012 reporting year (assumes same emissions as per 2010)	Cost of buying EUAs through Auction or in Spot Market at USD\$10	Maximum permitted tonnes CER / ERU Units (15% of emissions for 2012)	Number of Allowances that must be bought from EUA market or auction (excludes free allowance allocation and potential 15% CER / ERU)
1	500,000	0.21%	361,197	138,803	\$1,388,035	75,000	63,803
2	7,000,000	2.94%	5,056,751	1,943,249	\$19,432,487	1,050,000	893,249
3	9,000,000	3.77%	6,501,537	2,498,463	\$24,984,626	1,350,000	1,148,463
4	10,500,000	4.40%	7,585,127	2,914,873	\$29,148,731	1,575,000	1,339,873
5	12,500,000	5.24%	9,029,913	3,470,087	\$34,700,870	1,875,000	1,595,087
6	13,500,000	5.66%	9,752,306	3,747,694	\$37,476,939	2,025,000	1,722,694
7	18,500,000	7.76%	13,364,271	5,135,729	\$51,357,287	2,775,000	2,360,729
8	25,000,000	10.48%	18,059,826	6,940,174	\$69,401,739	3,750,000	3,190,174
9	32,000,000	13.42%	23,116,577	8,883,423	\$88,834,227	4,800,000	4,083,423
10	45,000,000	18.87%	32,507,687	12,492,313	\$124,923,131	6,750,000	5,742,313
11	65,000,000	27.25%	46,955,548	18,044,452	\$180,444,523	9,750,000	8,294,452
			Total Emissions To be purchased and surrendered	66,209,259	\$662,092,595		
Est Actual 2010 Emissions (t) - 10% increase on baseline year	238,500,000	Qty of Free Allowances 2012 (t)	172,290,741	Allocated EUA Spot Market Price (USD\$) January 2013	\$10.00	Qty of Auction Allowances from Aviation Pool (15% of cap)	31,516,599
Baseline Year Emissions	216,608,927	Emissions Cap (97% of Baseline Emissions)	210,110,659	Special Reserve (3% of cap)	6,303,320	Qty of Excess Emissions to be Surrendered not available from Auction Pool	34,692,661

How the Table relates to you

In the above examples, if you were airline 5, this is what the EU ETS will mean for you in 2013 to comply with your 2012 requirements.

- Your total annual emissions for 2012 are 12.5M tonnes
- As you submitted your tonne kilometre report, you get a proportion of your emissions as free allowances. For this example, we have assumed your proportion of Tonne Kilometres is the same as your proportion of Annual Emissions – this may not be the case.
- Based on the above you are entitled to a maximum of 9.03M tonnes of free allowances (only for surrender in 2013 – the 82% free allowances will decrease in subsequent years)
- Therefore, you will need to acquire at least 3.47M tonnes of acceptable allowances from some source – acceptable allowances are EUAs from the aviation pool, EUAs from the broader EU ETS market, or for 2012 only, up to 15% of your emissions from Kyoto Protocol projects supplying CERs or ERUs
- Bought at USD\$10 per tonne allowance, this cost to your airline would be USD\$34.7M
- Bought at USD\$15 per tonne allowance, this cost to your airline would be USD\$52.05M
- Bought at USD\$20 per tonne allowance, this cost to your airline would be USD\$69.4M

Allowance Acquisition Options

Now that you are aware of the need to acquire either EUAs or acceptable equivalents, you have several options from which to choose, including acquiring your required allowance credits from a combination of these:

- The aviation pool which will have an auction for 31.5M tonnes of EUAs
- The general EU ETS market pool of EUAs
- For surrender in 2013 for the reporting year 2012, up to a maximum of 15% (or 1.875M tonnes of allowances) of your emissions from Certified Emission Reduction Units (CERs) and / or certified Emission Reduction Units (ERUs) from Kyoto Protocol accredited projects.

This maximum is scheduled to reduce for the reporting years 2013 and beyond. Depending on the final decisions of the EU ETS Phase 3, however, this may change in the future.

If you were to wait until the end of reporting period 2012, you would have limited options other than to purchase from the auction pool and the spot market for EUAs, CERs and / or ERUs.

And if your reporting functions didn't provide you with ongoing measurement, you will have had no opportunity to plan your purchasing through the year or to put in place exposure hedging strategies to minimise financial impact.

Strategy Options

This Paper provides you with a range of strategy options that you may employ, however, please note, the implementation of these strategies are based on your ability to gain up to date data on a regular basis.

Please note – several of the strategies listed, while simple in and of themselves, when the correct data and review processes are available, can in combination provide a strategy of complex sophistication. It may be appropriate to discuss whether to employ external expertise to ensure professional management of your emissions exposure.

The acquisition options available to you in the employment of these strategies do not alter – aviation pool EUAs, general EU ETS EUAs and CER / ERUs. However, it is in the timing and the purchase options that you employ that you stand to gain from these strategies.

Your emissions trading strategy should utilize all available and relevant trading options and should ensure that your exposure is managed throughout the year.

General Strategies

1. You may decide to plan for a smaller net position than your projected emissions, with the knowledge that you will only have a relatively small position to acquire should your emissions reach or exceed your projections.
2. You may also decide to plan for a larger net position via strategic purchases than your projected emissions, thus providing you with the opportunity to sell excess allowances to operators and other businesses who have underestimated their own needs.

Having determined your overall strategy (and we recommend consulting professional traders regarding the establishment of that strategy even if you determine to manage the trading activity internally), we will review the trading options open to you.

These primarily are:

General EUAs

- **OTC (Over the Counter) Trading Tactics**
 - Purchase in market at daily rate – applies to EUAs, CERs, ERUs
 - Establish fixed price forward purchase agreements with EUA vendors, CER / ERU project developers and / or brokers – can apply to all, and terms vary depending on price, delivery, volumes etc
 - Establish floating price forward purchase agreements with EUA vendors, CER / ERU project developers and / or brokers – can apply to all, and terms vary depending on market price, delivery, volumes and other factors relevant to the agreement
 - Purchase call options for purchase at a later date but at set price
 - Gives you the right but not the obligation to purchase at that price
 - There is a small premium payment made to Unit owners at the time the transaction is agreed, in order to hold the Units as your options until expiry date, or you enact the option to purchase
 - Purchase put options for sale at a later date but at set price
 - Gives you the right but not the obligation to sell at that price

- There is a small premium payment made to Unit owners at the time the transaction is agreed, in order to hold the Units as your options until expiry date, or you enact the option to sell
- Establish swap agreements with other operators and businesses, where you may be over your emissions projections, but they may be under (or vice versa) at the end of the year, so the agreement permits the transfer of surplus allowances /credits from one organisation to a deficient partner in the swap agreement
- Cost averaging – using a set dollar / currency amount to purchase EUAs, CERs and / or ERUs on a routine periodic basis. This provides a less formal means of attempting to keep your overall costs lower, as you will take advantage of any dips in the market through this process. You will be exposed to any lengthy period of higher Unit costs, so this strategy needs to be closely monitored.
- Combinations – you may choose to have a number of different choices working in tandem – for example, you may have call options on EUAs and put options on CERs, depending on how you read the market
- **Formal Exchange Trading Tactics**
 - Purchase in market at daily rate – can apply to EUAs, CERs, ERUs (may be different exchanges for each commodity)
 - Depending on exchange, some of the OTC choices may also be available from an Exchange

Aviation Pool EUAs (restricted to aviation ETS participants)

- **OTC (Over the Counter) Tactics**
 - Uncertainty about availability on open market – to be determined
 - Establish fixed price forward purchase agreements with other aviation ETS participants – terms vary depending on price, delivery, volumes etc
 - Establish floating price forward purchase agreements with other aviation ETS participants – terms vary depending on market price, delivery, volumes and other factors relevant to the agreement
 - Purchase call options from other aviation ETS participants for purchase at a later date but at set price
 - Gives you the right but not the obligation to purchase at that price
 - There is a small premium payment made to Unit owners at the time the transaction is agreed, in order to hold the Units as your options until expiry date, or you enact the option to purchase
 - Purchase put options from other aviation ETS participants for sale at a later date but at set price
 - Gives you the right but not the obligation to sell at that price
 - There is a small premium payment made to Unit owners at the time the transaction is agreed, in order to hold the Units as your options until expiry date, or you enact the option to sell

- Establish swap agreements with other aviation ETS participants, where you may be over your emissions projections, but they may be under (or vice versa) at the end of the year, so the agreement permits the transfer of surplus allowances /credits from one organisation to a deficient partner in the swap agreement
- Cost averaging – using a set dollar / currency amount to purchase aviation pool EUAs if this proves possible. This provides a less formal means of attempting to keep your overall costs lower, as you will take advantage of any dips in the market through this process. You will be exposed to any lengthy period of higher Unit costs, so this strategy needs to be closely monitored.
- Combinations – you may choose to have a number of different choices working in tandem – for example, you may have call options on EUAs and put options on CERs, depending on how you read the market
- **Formal Exchange Trading Tactics**
 - Uncertain whether formal exchange arrangements will be enacted for aviation pool EUAs
 - Depending on structure of formal exchanges, some of the OTC choices may also be available from an Exchange

CER / ERUs – how can I get them without paying for them?

As well as the standard market acquisition options (listed in the other allowance type discussion), CERs and ERUs have a very distinct difference in how you can acquire these allowance equivalents (called Carbon Credits).

You have the opportunity to acquire Carbon Credits from accredited Projects (under the Kyoto Clean Development Mechanism or CDM process), which can be surrendered in lieu of EUAs, at no cost to the airline, through a voluntary Programme whereby your passengers contribute to projects that reduce CO₂ in the atmosphere.

Why will my passengers do that?

Many people nowadays are accepting climate change as a real problem. By offering them the opportunity to make a personal difference against their own contributions to CO₂ gas emissions, you will be seen to be helping to counteract the climate change problem.

How can I do that?

Greenflight has a specific programme (called the Greenflight Carbon Offset programme) which is designed to give airlines all of the benefits, and none of the costs or headaches. The website is www.mygreenflight.com and the CO₂ calculator is at www.mygreenflight.com/carbon-calculator

While we finalise that website, go to www.greenairclub.com and click on the PowerPoint for the Carbon Offset programme.

This programme, which can be your own branded Programme with a “**powered by Greenflight**” logo, or alternatively can be a branded “Greenflight” Programme, a no cost programme – we provide all of the resources and services needed to implement the programme for you.

We also cover the costs of implementation and manage the whole programme on your behalf with minimal input from your organisation, other than collaboration regarding the positioning and promotion of the Offset programme within your overall marketing programme.

Highlights of this Paper – the things you need to know

1. Your 2 Monitoring Plans (Annual Emissions and Tonne Kilometres) – need to be submitted by 31 August 2009 to your EU Member state Competent Authority

a. We can help you with these

2. Monitoring procedures complying with your Monitoring Plans need to be in place by 31 December 2009

a. We can help you with these

3. Monitoring needs to start on January 1 2010, even though you don't need to surrender any allowances until March 2013 (for the 2012 reporting period).
4. Your first Annual Emissions Report needs to be submitted for verification in 2011 for the 2010 reporting period

a. We can recommend appropriate consultants to provide these services

5. Your Tonne Kilometre Report (which will determine how many free allowances you will receive) needs to be submitted in 2011 for the 2010 reporting period
6. Your first "real" Reporting Period commences January 2012
7. You need to have Carbon Emissions management systems enabling you to provide up to date emissions exposure on a regular (if not daily) basis

a. We can help you with these

8. Your Carbon Trading Strategy needs to incorporate all available trading tools and up to date market data

a. We can recommend appropriate consultants to assist you with this

We trust this White Paper has helped you more fully understand the EU ETS, and provides you with some ideas about commencing your Carbon Trading Strategy.

For more information regarding this Proposal, please contact Dennis McMahon on +61403586111 or dennis.mcmahon@claerospace.com