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The European Union Emissions Trading Scheme

A challenge for industry or just an illusion?

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The European Union Emissions Trading Scheme (EU ETS)

By 2010, as part of its commitment to the Kyoto Protocol, the European Union has agreed to cut emissions of greenhouse gases (CO_2, CH4, N2O, HFCs, PFCs and SF6) by 8% from 1990 levels. These targets are differentially cascaded to each Member State through the 'burden sharing agreement'. Plans to achieve the targets are focused through the European Climate Change Programme with further complementary Member State actions.

The European Climate Change Programme fulfils the necessary role of harmonising regulatory approaches for policies having internal market implications (eg: agreements to limit greenhouse gas emissions from passenger cars) and provides support to the EU ETS.

It is intended that the scheme will start on 1 January 2005, and will run in two phases: from 2005 to 2007 (the Initial Phase) and from 2008 to 2012 (the Mandatory Phase).

In the Initial Phase the scheme will include only emissions of CO_2 with other greenhouse gases potentially being added in the Mandatory Phase. In the Initial Phase, 45% of European emissions of CO_2 will be included.

In each of the phases, key installations in the following industrial sectors will be allocated individual targets to limit their emissions. Across the EU this covers:

- Power generation and cogeneration
- Mineral oil refineries
- Basic metal production to include coke ovens, sintering plants and rolling mills
- Cement and lime production
- Glass and glass fibre
- Ceramics – including roofing tiles, bricks, tiles, stoneware and porcelain
- Pulp and paper

Within each there are size limitations intended to be consistent with those contained in other environmental regulations such as Integrated Pollution Prevention and Control (IPPC).

Further sectors, particularly aluminium and transport, may be added during the Mandatory Phase.

The European Union Emissions Trading Scheme

The European Union Emissions Trading Scheme (EU ETS) is due to commence on 1 January 2005. By 31 March 2004, all 15 EU Member States were required to submit their National Allocation Plans (NAPs) to the European Commission in Brussels, specifying permissible levels of carbon dioxide (CO_2) emissions from 2005 until 2007 (the Initial Phase). Only five countries delivered their plans on time – although at the time of this publication, 14 of the now 25 Member States had communicated their NAPs to the EU.

The EU ETS marks a different approach for European responses to environmental pressures. It represents a step change by being the first tradable instrument spanning the EU. The scheme aims to achieve overall reductions in CO_2 at a minimal cost (when compared to a regulatory approach) by enabling installations with high costs of reducing emissions to trade with those whose costs are lower.

A Pan-European Survey by Ernst & Young

Much has been published on emissions trading and the possible ramifications for industry and the economy. But what do the affected companies in Europe really think? Will the scheme deliver an effective market and emissions reduction? How well prepared are companies for the scheme's launch? Do they fully understand the risks? What effects will the scheme have on power generation structures and energy and power prices? Ultimately, and more fundamentally, what are the implications for the success of the scheme itself?

In April 2004, Ernst & Young conducted a survey dedicated to these and other issues surrounding the launch of the EU ETS that covers around 12,000 plants and factories, accounting for around 45% of EU emissions of CO_2. Fifty-five per cent of CO_2 emissions included in the EU ETS are a consequence of centralised and on-site power generation and fuel combustion (ie: almost a quarter of total EU CO_2 emissions).

In-depth telephone interviews were conducted with emissions trading decision-makers from power generators or industrial companies with power generating capacity:

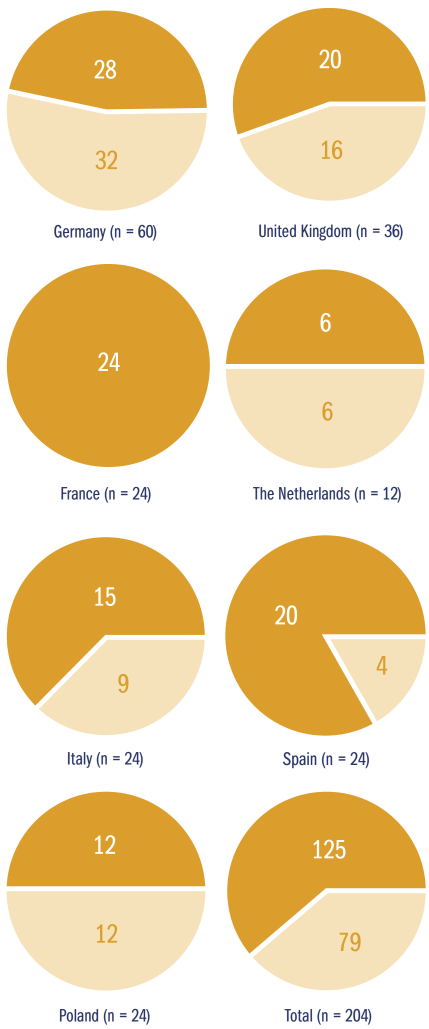
- Forty per cent of the companies surveyed are power generation companies, while 25% operate in the chemicals and oil processing industries. The remaining 35% represent the other affected industries
- A total of 204 companies were surveyed, which together account for 10% of CO_2 emissions covered by the EU ETS
- The respondents represent companies from the seven European countries with the highest CO_2 emissions: Germany, the United Kingdom, France, Italy, Spain, the Netherlands and Poland

FIGURE 1

Sample composition

Power generators

Other affected sectors



Key Findings

The survey identifies a number of issues with both the scheme itself and with companies' preparations for its introduction:

- There is widespread belief that the scheme will not start on time and will be ineffective in delivering the EU's emissions reduction targets
- Many companies expect that the carbon market will be illiquid, with low prices
- Concern was expressed over the lack of a sufficiently robust and transparent regulatory environment
- Many companies have not dealt with the strategic and financial consequences, nor identified how they could benefit from emissions trading
- Integrated carbon-management systems with robust internal controls are not in place
- Business-wide risks associated with emissions trading have not yet been fully embedded in respondents' risk frameworks
- Responsibility for responding to and coordinating emissions trading, particularly in companies operating across borders, is often disparate or non-existent
- Fuel mixes in power generation are expected to become less carbon intensive
- Energy and power prices are expected to rise

The survey findings show that, without positive action now, the Initial Phase of the scheme could prove to be a disappointment to both the EU policy makers and other interested parties such as the environmental lobby, as well as to many less well prepared businesses which may find themselves competitively disadvantaged in just six months time.

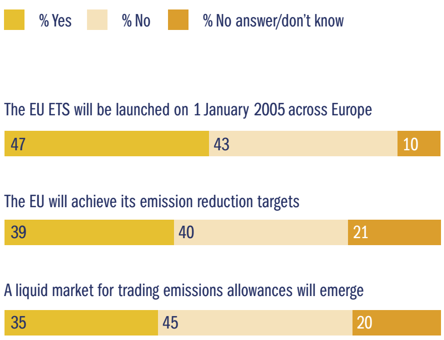
Scepticism and Uncertainty Lead to Doubts Over Initial Success for the EU ETS

A large proportion of the companies surveyed are extremely sceptical as to whether the launch date will be met and whether the objectives of the Initial Phase of the EU ETS will be achieved:

- Less than half of the respondents believe that the EU ETS will be launched as scheduled on 1 January 2005
- The dominant concerns expressed by companies are with the evolving regulatory frameworks and the determination of NAPs
- Only 40% believe that the EU's emissions reduction targets will be met in the Initial Phase
- A mere 35% of those surveyed believe that a liquid market for emissions trading will emerge in the Initial Phase

FIGURE 2

What is expected of the EU ETS?



The Need for Change

The primary aims of the Kyoto Protocol and the EU ETS are to encourage a step change in behaviour that will lead to reductions in specified emissions. The Initial Phase of the EU ETS has been designed as the sole intermediary stage ahead of the commencement of the Mandatory Phase on 1 January 2008. By providing a three-year period of acclimatisation, business and regulatory authorities have the opportunity to gain experience and to introduce and embed the substantial changes necessary. Together the two phases are intended to provide the long-term framework essential for capital expenditure planning and making business critical decisions.

The apparent scepticism over the launch of the EU ETS, the lack of regulatory certainty (now and into the future) and the shallow and illiquid nature of the emissions trading market, not only pose a threat to the success of the scheme, but could also put important environmental objectives at risk and create significant economic costs.

If this perception continues unchallenged and unchanged, it may well become self-fulfilling, as business behaviours will be determined by the current view. Willingness to take decisive action is weakened, threatening investment and closure decisions; the quality of businesses' preparations will be lower; real behavioural changes will be deferred until they can no longer be avoided.

An ineffective, relatively painless Initial Phase of the EU ETS will benefit neither the affected businesses nor EU policy makers. Ultimately it may do little more than defer the financial pain, which when taken with doubts over environmental effectiveness, substantially increases the risk of more stringent regulatory measures in the future.

Many Companies Yet to Prepare Adequately for the Scheme's Launch

One consequence of the widespread scepticism and uncertainty over the scheme's launch and effectiveness, as evidenced in the survey results, is that many companies are currently under-prepared, both at a strategic as well as an operational level.

Strategic Preparation

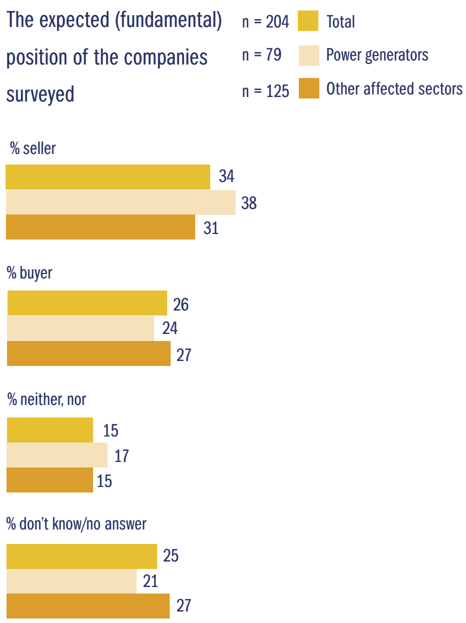
On a strategic level, many companies don't know, or are not aware of, their position in the EU ETS and have not considered or examined how they could benefit.

- Half of the companies claim to have dealt with the consequences of emissions trading for 2005 in detail – nearly a quarter admit to having done little or nothing
- Sixty-one per cent of respondents have identified measures to reduce emissions, yet only 40% have calculated the costs involved
- Only 30% have reviewed the possibilities of pooling
- Only 28% were able (or willing) to give a firm answer as to what they expected a tonne of CO_2 to cost in 2005 – and only 19% suggested a figure for 2007

The fundamental strategic positioning of a company depends to a very large extent on whether, in the future, it will be able to (or be obliged to) sell or buy emissions allowances. Thirty four per cent expect to operate as sellers and 26% as buyers, with 15% considering themselves to be neutral. The remaining quarter of respondents either gave no answer or didn't know what their position would be.

FIGURE 3

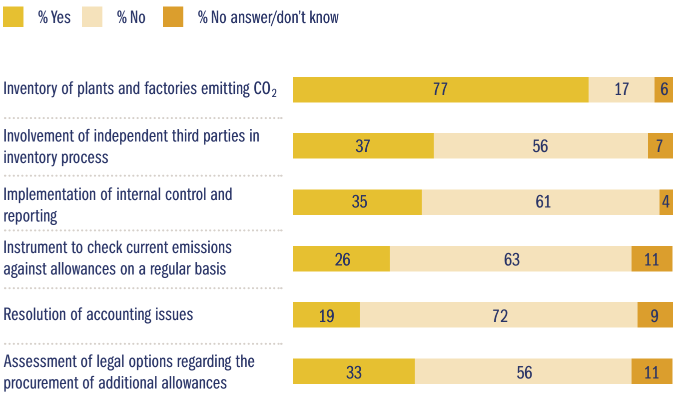
The expected (fundamental) position of the companies surveyed



Whilst 75% were prepared to offer a view of their trading position, 80% of all respondents either did not know, or were unwilling to comment upon, what level of allowances they expected to receive in the Initial Phase.

FIGURE 4

The state of preparations by the affected companies in Europe



Operational Preparation

At an operational level, a similar situation is apparent (see Fig 4). Many of the companies have yet to complete the elementary organisational and control-orientated tasks necessary for when the EU ETS is launched:

- Whilst 77% of the companies surveyed have carried out a complete inventory of their emitting plants and factories, only 37% involved an independent third party in the process
- 30% were unsure about the security of their collected data, with 10% admitting that they had little or no confidence in it
- Barely one-third have established an internal control and reporting scheme for emissions trading, although this varies considerably according to country: companies in the UK and the Netherlands, which have already voluntarily introduced some form of emissions trading, have a considerable lead
- As few as 26% of the companies have developed procedures to regularly reconcile emissions with allowances
- A mere 19% claim to have resolved accounting and reporting issues - although this may be an unexpectedly high figure given the lack of any internationally agreed accounting standard or guidance

An Integrated Carbon-Management System

The necessary preparation needed before the scheme goes live impacts most business activities, from estimation of actual emissions, through maximisation of the allowances allocated, to establishing strict internal controls and schemes, as well as understanding accounting implications, developing accurate forecasting capabilities incorporating carbon emissions and determining strategic and investment priorities. Only those companies that include all these aspects in an integrated carbon-management system are able to respond adequately to the requirements of the EU ETS.

Whilst the large-scale energy supply sector is more advanced than others, many businesses across Europe appear to be responding more slowly and less thoroughly than the timetable demands.

Despite the majority of respondents believing that the EU ETS will have a significant impact on their business, with many judging it to be a threat, preparations appear to lack focus and depth and fail to cover the range of business risks inherent in the EU ETS.

Emissions Trading Yet to be Fully Incorporated into Risk Framework

The fundamental changes brought about by the introduction of the EU ETS create new risks for business. The risks can be broadly summarised under three categories: Regulatory and Political, Reputational and Market.

Regulatory and Political

Just under half of the respondents consider the allocation risk to be high or very high. The companies directly affected by the EU ETS risk more active and astute competitors gaining excessive or inequitable volumes of emissions allowances, thereby securing a competitive advantage. Such entities can create potential windfall profits through the conversion of this excess providing additional liquidity, or using the excess to gain market share.

Only 40% of the companies surveyed see the compliance risk ie: the risk of potential government sanctions as a result of insufficient emissions allowances, or failure to meet reporting requirements, as either high or very high.

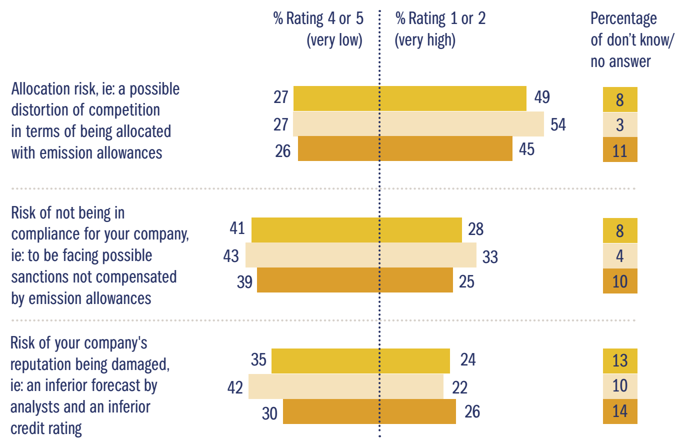
Reputational

Reputational risk also tends to be largely dismissed, with only one in four respondents evaluating this kind of risk as either high or very high. Ignoring the potential impact of this issue could lead to loss of credibility with the public, customers, environmental groups and institutional investors. Loss of credibility could result in downgrades by analysts and potentially higher borrowing costs.

FIGURE 5

Estimation of risks - at which level do you estimate the various risks for your company? Please evaluate the risk on a scale from 1 to 5, where 1 means 'very high' and 5 means 'very low'.

n = 204 Total
n = 79 Power generators
n = 125 Other affected sectors



Market

Furthermore, an unhurried approach to preparing for the scheme increases the market risks. An unclear strategic position and failure to control emissions trading activities effectively presents considerable risks for companies which may fail to acquire allowances to match their actual emissions, incurring a €40/ tonne penalty (and having to make up the shortfall in the following year).

The lack of confidence in an emerging liquid market for emissions in the Initial Phase effectively places companies, who are short and unable to make cost-effective emissions reductions of their own, at the mercy of volatile markets.

Risks Not Fully Recognised

The companies directly affected by the launch of the emissions trading system in Europe face a great risk, due to:

- The lack of an appropriate legislative framework in many EU Member States
- An ultimate lack of consensus as to the exact amount of allocated allowances
- The lack of an established market for trading emissions allowances
- Other unresolved issues

It is currently difficult to forecast what 2005 holds in store for these companies – especially in terms of the financial consequences of emissions trading.

The risks created by the EU ETS have not yet been fully recognised by many companies. Due to the potential huge financial consequences, these risks have to be identified, quantified and incorporated into the existing risk management system by each affected company.

Disparate Responsibility and Lack of International Coordination

The surveyed companies identified representatives from a broad range of business functions as being responsible for dealing with emissions trading. Forty-three per cent of respondents held the position of 'environmental officer' or worked in the field of 'environmental protection'. Twenty-eight per cent of the respondents from the power generators belonged in this category, in contrast to 53% from the non-energy suppliers.

Despite being acknowledged as a boardroom issue (a fact confirmed in other recent surveys), responsibility for emissions trading has almost universally been delegated.

Integration Is Key

It is apparent that few companies are taking a truly integrated approach to the key areas of activity (see Fig 6). Generally, each department develops separate strategies, which may not sufficiently consider the potential business risks and rewards to the company as a whole.

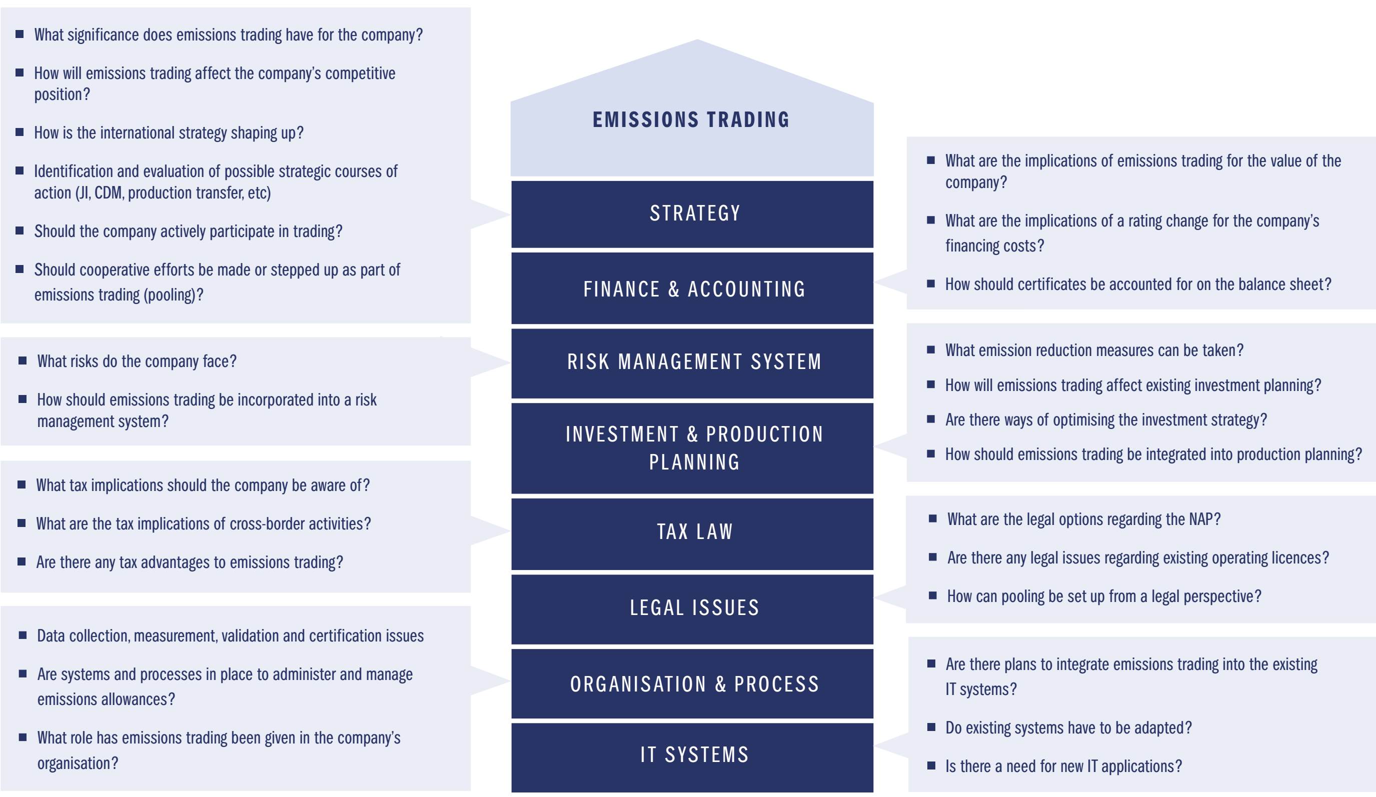
Although many companies are discussing the financial and strategic consequences of emissions trading, they are not necessarily taking appropriate action and may not be giving the department involved the support needed.

In companies operating internationally – around half of the companies surveyed – only 40% of the respondents said that a person has been delegated responsibility for cross-border management relating to emissions trading.

With EU countries developing at different rates and moulding the EU Directive to their own national legislation, international companies are urged to develop a coordinated approach to emissions trading. This approach must be based on a clear, internationally orientated communications strategy for emissions trading issues and is absolutely vital, especially in the next few decisive months in the run-up to the launch of the EU ETS.

FIGURE 6

Key areas of activity for the affected companies

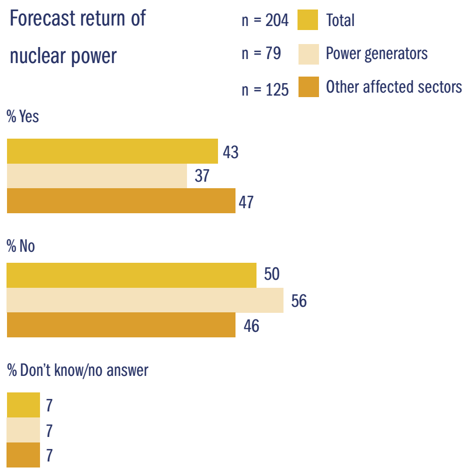


A Change in Power Generation Structures and Rising Prices

Emissions trading will have the most significant impact on the energy sector, particularly power generation. Accordingly, around half of the respondents anticipate that the fuel mix for power generation will change considerably over the coming years. Natural gas and renewable energy sources – particularly wind energy[1] – are expected to play a more important role in power generation, with proportionate reductions in coal and oil.

An answer to the question of nuclear power, however, remains unclear. Most power generators believe that current nuclear capacity will reduce as a result of existing planned closures, but opinions are very much divided on a new generation of nuclear power plants with as many as 43% of those surveyed predicting a renaissance. Results show a lower percentage of power generators forecasting a return of nuclear power than non-energy suppliers.

FIGURE 7



Thirty per cent of the power companies surveyed said they have drawn up specific measures to change their power generation fuel mix. Ten per cent are planning power station closures (especially oil and coal-fired power stations), while a quarter of them are set to replace old power stations with new. A further 20% of companies said they were planning to convert existing power stations, mainly from coal to natural gas. Fifty-five per cent of the respondents planning conversion were aiming to invest more heavily in renewable energy sources, especially biomass and wind energy.

[1] Although it is important to note that, in the majority of cases, wind power and other renewable energy sources will be financially incentivised outside of the EU ETS

Unclear Impact on Energy Prices and Investment Decisions

It is surprising that only half of the companies have accounted for the cost of emissions allowances in their investment appraisal process. Investment decisions are based on a number of political, technical and financial factors. Yet the forthcoming EU ETS has currently not had the expected influence on the investment behaviour of most of these companies. This creates further doubt over whether the EU ETS is truly inspiring a step change.

It is expected that the launch of the EU ETS will increase energy and power prices. Respondents predict a hike in the price of natural gas – estimated at around 20% over the next two to three years. There was also overwhelming consensus that the wholesale price of electricity would rise. An average increase of 15% is anticipated.

The survey demonstrates that companies are unclear as to the eventual impact of the EU ETS on power generation and, in turn, on energy and power prices and the market as a whole. In addition, many companies do not seem to be considering the extent of this trend and accounting for it in their plans and strategies.

Revising Purchase and Generation Strategy

Electricity markets will undoubtedly be influenced by an operating EU ETS which will cause price increases for primary energies, especially gas. Increasing gas prices will be driven by rapid growth in worldwide demand, combined with an increasing scarcity of energy resources and, in some markets, as a result of contractual links between oil and gas prices.

Each utility, therefore, should review its power generation and electricity purchase strategy, as well as energy-intensive, industrial customers. Long-term contracts, hedging the risks or intensifying the use of renewables and energy-saving technologies, as well as reducing the carbon intensity of generation, could be options for careful consideration.

There will be 'Winners' and 'Losers' in the EU ETS

Whether the scheme meets its emissions objectives or not, the fact that rationing is taking place and a trading market created, will result in winners and losers. The ratio of companies expecting the overall impact on profit of their emissions trading activity to be positive, as opposed to negative, is more or less in balance (see Fig 8).

The main reasons why some companies state that they are expecting a positive overall effect are:

- Expected seller position
- Investment in measures that will reduce emissions and thus lead to additional emissions allowances for the company, which can then be sold
- Investments in renewable energy sources and change in energy mix

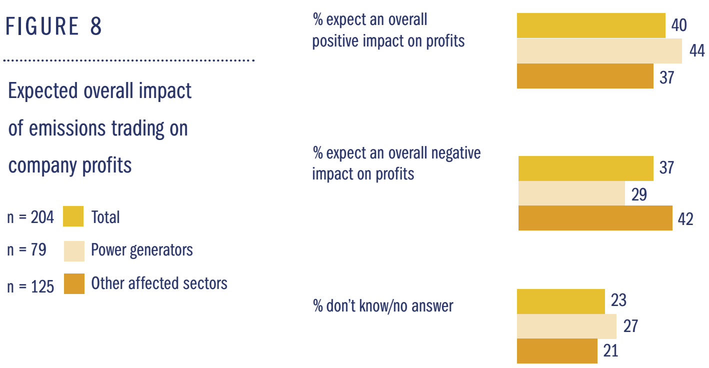
Conversely, the main reasons why some companies fear a negative impact on profits are:

- Additional emissions allowances will have to be purchased
- Rise in power generation costs, which cannot be passed on to the market in equal measure
- Energy and power price hike (for energy-consuming, industrial companies)
- Competitive disadvantages due to past investments which are carbon intensive

The expectations of non-energy suppliers are far more reserved than power generation businesses, the latter showing a great deal more optimism in the run-up to the EU ETS and generally being better prepared.

FIGURE 8

Expected overall impact of emissions trading on company profits



The EU ETS: Challenge or Illusion?

The EU and Member States have achieved much in developing an EU-wide scheme in such a short time, but if the scheme is to prove anything other than an elegant yet hollow façade, then both the EU and business collectively need to rise to the challenges evident in this survey – now.

The Challenge to Business

The EU ETS presents new risks, challenges and opportunities that demand a cohesive, integrated response that puts the development of appropriate strategy and risk management at the heart of businesses' preparations and actions. Companies that are too passive – waiting instead for greater regulatory certainty – could miss the opportunities and fail to benefit from the EU ETS.

Failure in this regard could be damaging, even early on in the Initial Phase. Whilst carbon prices may be expected to be low and any financial impact not severe, how will the markets view an emitter reporting early in the scheme's life who can neither represent the concerns of the investor community, nor articulate their strategy or risk management processes?

Key considerations for companies preparing for the EU ETS:

- The launch date is 1 January 2005. Despite any reservations about whether or not it will happen, companies need to be ready
- Good preparation demands an understanding of all the entrepreneurial aspects of emissions trading
- Ensure that the emissions trading function is well supported and integrated with the rest of the business
- Ensure that efficient and effective communication and coordination processes are in place, especially when operating in multiple countries covered by the EU ETS
- It is of critical importance to establish a carbon-management system with robust internal controls and to ensure effective penetration of emissions trading into business functions and strategy
- Integrate the risks of emissions trading into a proactive risk management system to mitigate and control
- Review purchase and generation strategies for electricity – consider new strategic alternatives

The Challenge to the EU and Member States

There is a strong degree of scepticism about the likely impact and effectiveness of the Initial Phase of the EU ETS. The status of businesses' preparations reflect that view. If this is not to become a self-fulfilling scenario, then the EU needs to act firmly, decisively and consistently, both through the 90-day NAP review process and in then delivering the robust, transparent regulatory framework that business needs.

For investment to be encouraged and for critical decisions to be made, survey respondents point to the need for much greater regulatory certainty and clarity beyond the Initial Phase. By providing longer-term confirmation of targets and the market framework, confidence would be built and the step change that is needed could be planned for and achieved by business. Without it there is a real risk that environmental targets will be missed or barely achieved.

The EU and Member States therefore need to:

- Build on the momentum that has been created so far and press ahead urgently with specifying the plans for the Mandatory Phase, and beyond 2012
- Ensure that the assertions made by the EU as to their intent to make the Initial Phase bite are carried through in practice

Taking Collective Responsibility

Ultimately, however, if the Initial Phase of the EU ETS fails to deliver real progress towards an effective market and emissions reduction targets are not met, then what next from the EU? The risk to European business is that by failing to take collective responsibility to ensure that the scheme succeeds now, the Mandatory Phase and beyond may yet prove to be substantially more directive.

As it stands now the scheme seems to be crying out for certainty, transparency and longevity – failure on any of these fronts continues the 'storing up of today's problems for tomorrow'.

If the industry and governments of the Member States are going to rise to the substantial challenges represented by the EU ETS, considerable ground remains to be covered. Only then can the scheme deliver real benefits and not simply create an illusion of success.

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