

The european emissions trading scheme report sample

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Introduction.

The European emissions trading scheme (EU ETS) was launched in 2005 to curtail adverse climatic changes in the Europe. Today, the EU ETS is the largest emissions trading scheme in the world. Its foundation and motivation was based on the EU climate policy of reducing the greenhouse gas emissions emitted from human activities that pose dangerous and harmful climatic changes to the world. It currently covers 1100 factory plants and other high energy plants in all EU member states. The EU ETS was the first cap-and -trade allowances system for carbon four oxide emissions alongside other greenhouse gases at the international company level. The scheme was founded on the outstanding and innovative Kyoto protocol, the clean development mechanism (CD) and the joint implementation (JI). The scheme aims at discouraging the use of carbon emitting technologies by imposing a price on every ton of carbon emitted thus encouraging the use of low carbon technologies in investment. The costs charged on emissions have compelled the industrial producers and the entire business community to devise some creative and innovative as well as cost effective ways to stop the adverse climate change. The operation of the EU ETS is centered on the mere provision of allowances for all trading carbon emissions. It seeks to reduce emissions in a cost effective method and thus giving the companies the opportunity to choose on the methods to use so as to reduce their emissions to receive the allowances. (McIlveen. R & D. Helm, 2010), It operates on a cost effective basis explained in the following graph.

The EU ETS has over time has been able to provide a cost effective means for all industries in the European Union to reduce their emissions. It is also

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currently supporting the developing countries in their efforts towards sustainable development through the use of investment in clean technology which has minimal emissions of carbon and other greenhouse gases. By putting a price on carbon, the scheme aims at inducing a relevant financial value to every single volume (ton) of emissions saved. The high carbon price in turn causes a trickling effect which compels investors to venture in to the use of low carbon technologies. The scheme is a rational project which aims at achieving environmental sustainability which is founded on economic policies: by establishing the rules which govern the emissions from production activities. The price put on carbon acts as a control over the use of such fuels within the EU region. It is an economic incentive that leads to innovations and strategies to utilize other less harmful fuels in the production process without recording any negative impact on the company's competitiveness. Cost effectiveness of the scheme is founded on the ability of all the participating companies to buy and sell the allowances. Because the price of the targets is dictated by demand and supply, the scheme can easily reach its targets at a minimum cost. The scheme provides incentives for all the participating companies to invest in clean technology because the use of carbon emitting fuels is costly. The price put on carbon serves as a quota: a market based instrument to control the use of carbon emitting fuels. Rationality principle applies in the schemes mode of operation because the companies under the EU find it cheaper to use clean technology than the carbon fuels. On another perspective, the use of non-carbon fuels serves as a great savior of the society from the harmful costs of CO₂: externalities. These are the harmful effects of the emissions on the environment. The

scheme saves a great deal of financial and environmental costs. (Tieten. T & Lewis. L, 2012),

EU ETS is founded on four key principles which guide its operation:

- It is a cap-trade system. This is a market based approach aimed at combatting pollution by providing economic incentives which will reduce the volumes of pollutant emissions in to the environment. The cap system places a strict limit on the amounts of greenhouse gas emissions possible from the production activities. It sets the maximum price possible to protect the consumers.
- Mandatory participation for businesses in the sectors covered. All the businesses operating in the sectors covered under the scheme should at all times take part in the scheme's environmental protection policy otherwise they will be victims of the non-compliance fines which stand at €100 per ton. This compulsion ensures that no companies take advantage of exclusion.
- A strong compliance network. The scheme is empowered to ensure that all members comply with the laid down protocols and the defaulters are fined appropriately.
- The market taps in to emission reduction across the world beyond the EU, by accepting protocols from the Kyoto protocol and the CDM as well as the JI. (Field. B. C, 2008),

Implementation of the EU ETS.

The implementation of the scheme has usually been done in four specific phases:

Phase 1 (January 2005- December 2007)

This phase was founded on learning by doing seeking to establish a stable footing for the next phase. In this phase, the scheme recorded an impressive success by establishing a price for carbon free trade in emission allowances all over the European Union, free trade in emission allowances and the required infrastructure to keep a track of the emissions from the businesses covered. At this stage, the scheme was only focused on carbon emissions from power generators and other energy intensive sectors. The non-compliance fee was €40 per ton. From this, set specifications, it would be costly not to stop emissions since the fee slapped would amount to astonishing expense if analyzed annually. A diminishing emission was allowed, meaning that it was not a one-off project. Any company would opt to comply to avoid incurring that cost and instead enjoy the allowances. (The NEA website)

Phase 2. (January 2008- December 2012)

During this period, all the members of the EU were supposed to comply with the set emission targets under the Kyoto protocol this time round. A full compliance by the member states would contribute positively towards achievement of the projected reductions in carbon emissions. This phase coincided with the Kyoto protocol which required that all member states to meet their emission targets. It was expected that firms ought to have sought working complementary for all facilities that contributed to the emission. Full compliance translates to maximum production in the economies, this time round using environment friendly machines. (The NEA website)

Phase 3 (January 2013- December 2020)

This eight year period would encourage long term investment in emission reductions by providing the required basis to enable accurate predictions on the same. This phase is already in progress and the scheme has been fully strengthened to enable the achievement of the EU climate and energy targets by 2020. The penalty for non-compliance is now set at €100 per ton. This seems practical since the project initially defined short-term as well as the long term measures to curb excessive emissions, with a strict compliance checklist being brought to analyze the progress. The penalty would also serve as an influence for companies to comply and enjoy the allowances rather than pay the penalty. (The NEA website)

Phase 4. (January 2021- December 2028)

In this phase, the scheme will be devoted to the establishment of a compatible global system to back the carbon market across the whole world. The scheme also aims at increasing the rate of emissions reduction to above 7. 4%, establish a limited access to international credits, and also introduce reasonable minimum prices.

Compliance with the provisions of the scheme is enforced by the a framework of rules and regulations which require all installations to surrender a specific number of allowances which should always be equal to their number of verified carbon IV oxide emissions for the same year. Hefty fines are imposed on all those companies that do not surrender a true and fair view of their annual verified emissions. This serves to put all the possible

offenders of the system on notice for eminent punishment in case an irregularity is observed. (The NEA website)

Incorporation of the aviation industry in to the scheme.

In a bid to increase the campaign against carbon emissions, the scheme was extended in 2012 to incorporate; airlines flying to, from or within the European Union from all nationalities were required to obtain allowances to cover their emissions regardless where they are all based. This implies that the scheme will not cover flights made exclusively outside the EU region of operation. The scheme decided to adopt this strategy to counter the fast expansion of emissions from the aviation sector. There was a projection that the inclusion of the aviation industry in to the scheme would contribute to a massive demand increase for the allowances by an average of 19-12 million tons of carbon IV oxide per year during the second phase. Ever since 2012, all the airlines receive real trade allowances which cover certain carbon IV oxide emissions from their operations in the EU region. The capping of emissions in the aviation industry has contributed to the reduction of emissions from 97% in 2005 to 95% in 2013. The scheme aims at achieving significant reductions in emissions from the aviation industry and all the parties emitting excess amounts of carbon IV oxide will be required to reduce such buy obtaining extra allowances. The scheme is designed to ensure that the aircrafts operating modern crafts with few emissions benefit more from the allowances. (The NEA website)

The aviation industry in the scheme operates on the theory of economies of large scale because the aircrafts with a higher occupant number or a larger

cargo carrier will always tend to be on the advantage of the scheme due to the greater number of free allowances. Short distance flights are also causative agents of adverse effects from the scheme because particular emissions are usually high on short distances. The defaulters and the non-compliant aircraft operators also face the €100 fine per ton plus a compulsory purchase or surrender of the defaulted allowances. The operator may even be barred from operating within the EU zones if need be. In order to ensure and enhance compliance, all aircraft operators are required to monitor and report their annual emissions on a per flight basis. The free allowances to the aircraft operators are issued on a benchmark factor with the year 2010 as the base and calculated by the EU. (Endres. A, 2011), The diagram below shows the marginal cost curves for two sectors.

In the pretext of cost minimization, all aviation industry operators will first be cost averse and avoid the penalty. The presence of the allowances available to the operators lays a good background for cost effectiveness. It will also reduce the externalities associated with the use of carbon emissions. The emissions are reduced where the costs are least. From an economic point of view, the EU ETS has a direct impact on the competitiveness of economic entities in the short and long run horizons. It affects the economic performance of producers in the EU region due to the kind of policies which are outlined and implemented by the scheme. This particularly hits hard those producers who are based in the carbon emitting industries due to the restrictions meted on them by the scheme. According to economic theory, the deliberate action of putting a price on carbon will compel the victim industry to develop strategies aimed at reducing emissions so as to

maximize the benefits of either buying less allowances or selling excess allowances due to its low level of activity. According to the same theory, the future price of carbon will be determined by the scarcity of the allowances. The level of emissions from each company will have a direct implication on either the amount of allowances sold or bought by the individual company. Abatement also couples with the level of emissions to determine the scarcity which in turn determines the price of carbon. The overall effect would be a steadily rising price relative to the level of abatement and scarcity. For example, during recessions, the levels of recession and other economic crises, the level of scarcity will diminish. On the side of the companies under the scheme, the value of the allowances is taken as an opportunity cost and companies weigh against several available options to determine the level of emissions that would result from the lowest opportunity cost. Eventually, trade will only be left for the companies with abundant excess allowances while those with less or without any allowances are pushed out of trade by the economic forces. Other firms will leverage on banking their allowances for future use. Despite the fact that abatement costs are so uncertain and unpredictable, they pose the challenge of pushing prices unnecessarily high but this is carefully contained by the price cap which sets the maximum allowable price level to protect the consumer. The rationality principle applies in the scheme especially when the companies are faced with a choice of the allowances: no company will choose to incur the cost but would rather opt to derive the maximum benefit possible. (Perman. R, Ma. Y, McGilvray. J. & Common. M, 2011)

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