

EUROPEAN UNION DIRECTIVE ON GREENHOUSE GAS TRADING

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The academic debate over trading in emission rights is based on the pre-condition that an authority responsible for environmental protection shall issue a certain number of tradable allowances for releasing emissions into the atmosphere. Trading in these rights is done so that polluters with low costs for reducing emissions will sell their emission allowances, whereas polluters with high costs for reducing their emissions will, in the case of needing allowances for releasing emissions, buy them. The final result according to the academic proposal should be an equal extent in the reduction of the environmental burden, where this reduction should be achieved with the minimum costs.

The first greenhouse-gas trading programmes began in the USA at the start of the 1970's. However, at that time the trading was in atmospheric pollution rights, as well in rights to use environmental resources, such as soil and water. At present the situation is that systems in tradable pollution allowances are now applied in various modified forms in their application to various types of harmful substances negatively affecting the quality of the air, water and soil.

The application of the functional system of trading in emission rights requires that the following are set:

- The programme's aim – meaning to reduce the environmental burden – selected components of it at minimum costs. This aim can be derived from emissions and imissions indicators. The setting of a maximum admissible quantity of emissions released (a limit) is deemed an environmental aim, having the broadest application.
- The tradable commodity – meaning the specification of the object to be traded, where this ensues from the programme's aim, i.e. a reduction in the burden upon selected components of the environment (atmosphere, water and soil) by certain types of emissions (the commodity).
- The allocation of emission rights.

Practice and approaches in allocating emission rights

In practice the following approaches are used in applying the allocation of emission rights:

- Historical emissions – this is the method of allocating free of charge emission rights (quotas) on the basis of emissions produced in previous years. Their level may be calculated as an average, maximum or minimum value, or as well as an average increased

by a “development coefficient”. Where a data base exists, this method allows the level of allocated emission allowances to be set in a relatively simple way and at the same time the possibility for abuse in the allocation of emission allowances to be limited. A negative feature of the application of this allocation of ownership rights is the absence of a price signal that would reflect the costliness of reducing emissions to the atmosphere in the case of individual polluters.

- Auctions – represent the method in which emission quotas are acquired at auction. This means that polluters (emitters) pay for their own emissions that they would, in the case of the application of the previous method of allocating emission allowances, have gained free. This method of allocating emission allowances is advantageous for the state administration for the reason that it gains funds that may subsequently be used in favour of financing environmental measures.

- Historical emissions updating – this is a combined method using data from the development of historical emissions and where the time interval is flexible, meaning that if for a given year the quantity of quotas was set on the basis of emissions, for example for the previous two years, then for the following year the emissions level is set on the basis of the data one year newer. The number of the emission quotas allocated in this way depends on the quantity of emissions the level of which is linked to the updated volume of emissions.

In this method businesses can prioritise even a more significant increase in emissions in the case where this is linked with an increase in the volume of production and subsequently also profit. By contrast, in the case of historical emissions and auctions busi-



nesses will focus attention on reducing emissions, where they will compare the extent of their reduction to the level of costs they must outlay for reducing these emissions and with the profit from selling the emission allowances.

- Combined allocation method – an allocation method in which a part of the emission quotas is distributed on the basis of historical emissions and the remainder is bought at auction. In the first phase of this method's application the distribution of emission allowances is done exclusively on the historical emissions principle. Later however the share of emission allowances acquired through purchase at auction is gradually increased.

- Atmospheric emission reduction credits based system – this system is applied so that emission sources gain credits for reducing harmful substances in the atmosphere, if fewer emissions are released than those set by legal limit or otherwise defined basis.

- Cap and trade system – works in the way that an authority sets for a certain period and in accordance with health and environmental standards, an overall ceiling for released emissions, termed the “cap”. This quantity is assigned to individual polluters on the basis of a certain key. Thus the polluter acquires its emission right. In the case that it reduces emissions in its business below the set level then it can sell its right to emit the “remaining emissions”, or conversely, if it emits more emissions than permitted by its allocated emission allowance, then it must buy the allowance to emit them.

Extent of emissions trading

Emissions trading can be limited either to one firm, concern, region, country, but can even represent an international trade. A determinant influencing the extent of trades is the type of pollutant. This means that where a pollutant has negative impacts even over large distances, international trading is also appropriate.

Emission allowance handling

The owner of an emission allowance can, in the case of not using it, transfer it to the following period, meaning that the allowance can be “banked”. If the owner decides to sell this allowance, then in economically advanced countries broker firms and exchanges exist, enabling the owner to do so. The owner of the emission allowance will receive additional revenue from its sale.

The functionality of an emission allowances market is influenced by:

- the existence of environmental technologies ena-

bling emissions to be reduced,

- an active market with multiple buyers and sellers, enabling the transparent pricing of emission allowances,
- the ability of authorities responsible for monitoring pollution – these must be able to monitor emissions,
- the commodity traded must have a permanent effect on a geographical area,
- market rules must be simple and transparent, enabling low transaction costs.

Preparation for greenhouse gas trading in Germany

In the federal state Hesse a fund of EUR 1.3 million was established by the federal state of Hesse, Deutsche Ausgleichsbank, Deutsche Telekom and Dresdnerbank. The objective of establishing the fund was to prepare for a system of emissions trading, i.e. to trial the emission trading mechanism and identify pre-conditions and stumbling blocks that may arise in connection to the participation of small- and medium-sized enterprises.

The whole management of preparations is realised in the framework of the Hessen Tender. Parties interested in participating in the Hessen Tender must have a registered office or branch in Hesse, where they are obliged to realise measures for reducing emissions in Germany by:

- increasing fuel efficiency,
- a change of fuel,
- construction measures (insulation),
- using renewable energy sources,
- reducing CH₄ emissions (only in the case of Joint Implementation).

The Hessen-Tender does not take account of other forms of reducing emissions.

Parties interested in participating in the Hessen Tender send their project proposals to the administrator of the Hessen Tender, Deutsche Ausgleichsbank. Deutsche Ausgleichsbank assesses project proposals on the basis of adopted criteria. The main criteria for a project's weighting include:

- the project's technical simplicity and financial demands (75%),
- the existence of an environmental management system in the business,
- speed and applicability.

Where a project fulfils the criteria set, its submitters are invited to prepare a bid. First however the project's submitter must hand over an elaborated bid, where a certification company must verify the emissions reduction.



Bids from the projects submitted in the Hessen Tender are selected via auction, where the set price range is EUR 2-10 per t/CO₂. The Tender buys up in the auction 60% of the reduced emissions offered. The remaining 40% can be offered on the forwards market.

The Hessen Tender pays 80% of the price for the reduced emissions bought. The remaining 20% is paid following project completion. The maximum quantity of emissions purchased is 50 000 t/CO₂, where the amount paid may not exceed EUR 100 000.

Project submitters must evidence the power of disposition for the reduced emissions, and this for direct as well as indirect emission reductions, and in the case of Joint Implementation also for CH₄.

Evidence on a direct emission reduction is that a project submitter is also the operator of a plant in which emissions have been reduced or a fuel used has been changed. An indirect reduction in emissions arises through the consumption of heat or electricity at the place of the project's submitter. The emissions however originate from sources that are not operated by the project's submitter. This can, for example, concern the utilisation of surplus heat, a reduction in the consumption of heat through optimising the production process, etc. Projects had to be realised by 31 December 2004.

Where through the project's realisation the contractually agreed reduction in emissions is not achieved, the participant in the Hessen Tender is obliged to buy up the necessary quantity of emissions from other participants in the Hessen Tender and to transfer them into the ownership of the Hessen Tender. Where it is not possible to buy up the emissions such a participant is obliged to pay the purchase price for the whole shortfall and furthermore pay a fine twice the level of the purchase price.

The EU and the Greenhouse Gas Trading Directive

The European Union through adopting the VI Environmental Action Programme places environmental protection as its priority and considers the application of an emissions trading system as an economic instrument enabling the set objective to be achieved at minimum costs to society.

¹ Consent of the Community to fulfilling obligations to reduce greenhouse gas emissions pursuant to the Kyoto Protocol jointly in accordance with Decision 2002/358/EC.

² Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading and amending Council Directive 96/61/EC

This approach by the European Community is within the purview of the UN Framework Convention on Climate Change, the objective of which is to stabilise the concentration of greenhouses in the atmosphere at a level preventing dangerous anthropogenic interference in the climate system. In connection with its signing up to the Kyoto Protocol the European Community (hereinafter "the Community") undertook to jointly reduce greenhouse gas emissions by 8% over the years 2008 – 2012 in comparison with the state at 1990¹.

The greenhouse gas trading system in the Community is governed by Directive 2003/87/EC of the European Parliament and of the Council².

Pursuant to the directive operators of activities in the field of energy, the production and processing of ferrous metals, the raw minerals industry and others must from 1 January 2005 in all EU member states hold an allowance for greenhouse gas emissions, issued by the respective authority. An allowance may relate to one or more installations at the one operating plant operated by one operator. The condition for issuing the allowance is that the operator must be able to monitor emissions, submit reports and adopt the obligation to each year surrender quotas in the number equalling emissions released from an installation.

The operator shall also be under the obligation to inform the respective authority of potential changes in the performance of activities which may result in the need to adjust an allowance already issued for greenhouse gas emissions.

Quantifying the number of issued and allocated emission quotas

The total planned number of issued and allocated emission quotas shall be quantified in the national allocation plan drawn up by each country for the period of three to five years. The proposal for distributing emission quotas to operators shall become a component of the national allocation plan.

National allocation plans are sent to the Commission and other member states. They are assessed by a committee appointed by the Commission, and which can reject the plan as a whole or in part for the reason that the criteria set for its preparation have not been adhered to³.

Form of assigning emission quotas

Pursuant to the Directive emission quotas for the

³ In the SR Act No 572/2004 Coll. on emission quota trading and on the amendment of certain acts repeals the Edict of the Ministry of the Environment SR No 60/2003 Coll. laying down national emission caps and quotas.



first three-year period shall be allocated free of charge. In the second period (2008 – 2012) emission quotas allocated free of charge shall form at minimum 90% of the total number.

Number of total quotas and their allocation

For the three-year period beginning 1 January 2005 each member state is obliged to adopt a decision on the total number of quotas issued and their allocation to operators of installations. The decision must be based on an allocation plan confirmed by the Community, where it must be adopted 3 months prior to the commencement of the first trading period and one year prior to the commencement of further trading periods. In allocating emission quotas room must be left for access to quotas by new participants.

The total numbers of quotas shall, for individual years, be allocated proportionally by 28 February of a given year. In the case of unforeseen circumstances a member state will have the possibility to request the Commission to issue additional quotas for a certain installation. If the Commission satisfies the request, the quotas issued in this manner shall not be transferable.

Transfer, surrender and cancellation of quotas

It will be possible to transfer emission quotas between natural and juristic persons of the Community and natural and juristic persons from third countries accepting these emission quotas. This means that member states shall mutually accept emission quotas issued by another state, i.e. count them into the fulfilment of obligations of the operator owning the quotas.

The operator of each installation shall be obliged to surrender each year by 30 April a number of quotas equalling the total emissions produced by its installation during the preceding calendar year. These quotas shall then be cancelled. This means that operators shall be able to use emission quotas acquired, only during the period of their validity.

Following the end of the first trading period, unsurrendered and uncanceled quotas shall at 31 April 2008 become unnecessary. This approach shall apply also in following periods.

The European Community considers that from 2008 onwards member states will have the possibility to additionally include into emission quota trading a broader sphere of activities, as well as to expand the sphere of emissions, though only under the condition that the Commission approves their inclusion.

The Community also wants to conclude agreements with third countries that have ratified the Kyoto Protocol, for the purpose of the mutual recognition of

quotas. An exception for the temporary exclusion of a certain installation and activity from the emissions trading system is granted by the Commission. The Commission's decision on such a request shall be based on an effort to not allow a disturbance to occur to the internal market competitiveness.

Pooling

Operators performing one of the activities in the field of energy, the production and processing of ferrous metals, the production of wood pulp, paper and cardboard must form a pool of installations for an indefinite period.

The representative of the pool – a fiduciary – shall take over the total number of emission quotas issued and shall be responsible for handing over into the pool quotas corresponding to the total emissions from these installations.

The Community plans from 2008 to begin international emission quota trading. In connection to this it is considering the use of project mechanisms, including Joint Implementation. This mechanism enables countries having problems in fulfilling the obligation to invest in a project in another country, while the countries shall divide the emission reduction achieved on the basis of a convention. A country investing in such a project lowers its national balance of greenhouse gases by the agreed amount. The country into which the investment was made on the other hand increases the agreed number of emissions produced by the number it transfers to the investor's country. This trade may be made only if both countries are included in Annex I to the Framework Convention.

The Clean Development Mechanism shall be realised in a manner similar to the mechanism of the Joint Implementation with the difference that the reduction in emissions may be realised outside the states listed in Annex I to the Framework Convention.

International emissions trading is governed by Article 17 of the Protocol. Under this article all countries pursuing the objective of reducing emissions can participate in emissions trading.

Monitoring and submission of reports on harmful substances in the atmosphere

In connection with the monitoring and submission of reports on emissions each installation operator shall be obliged to submit at the end of each calendar year a report on emissions from the operated installation to the respective authority.

Reports compiled by an operator must be verified. The auditor in its verification shall confirm the accor-



dance, or otherwise, with criteria set in advance (see Annex V to the Directive). Where the auditor finds a discordance with the set criteria, the operator may not make any further quota transfers until accordance with the set criteria is stated in the report.

Fines

In the case of a breaching of national regulations concerning the greenhouse gas emissions trading system fines shall be imposed. The EU wants to publish the names of those operators who violate the requirements for surrendering quotas. In the case of the non-surrender of quotas, the fine shall be EUR 100 per tonne of carbon dioxide equivalent emitted by the installation. The operator must surrender the missing quotas at their following annual settlement. In the first three-year period of emission trades the level of the fine for exceeding the emissions quota shall be reduced to EUR 40 per tonne of carbon dioxide equivalent emitted by the installation.

Information on the allocation of quotas and reports on emissions shall be available to the public. Limitations shall concern only selected provisions of Directive 2003/4/EC90/313/EEC. Member states in connection with the implementation of this directive have the obligation to:

- appoint an authority, or authorities, to ensure implementation of the Directive,

- create and supplement a register of quotas issued, held, traded, cancelled,
- ensure public access to the register.

The member states are obliged to send a report on the Directive's application to the Commission.

The central administrator, who shall manage the protocol on transactions made, i.e. record the transfer, surrender and cancellation of quotas, shall be appointed by the Commission. Furthermore, the central administrator is obliged to check the transactions made, where in the case of a discrepancies arising, must inform the respective member state of this, in order that the state does not register transactions of quotas until the discrepancies arisen have been clarified.

Conclusion

Slovakia's accession to the European Union enables it also to participate in greenhouse gas trading. We consider a knowledge of the mechanisms in this trading, their legislative framework, as well as the limitations and stumbling blocks that ensue in connection with their realisation as important not only for the business sector, but also for intermediaries. Therefore all these participants should devote attention to this trading.