

# Emission Trading System – the cement industry's share

The objective of the European Emission Trading System is to provide the 25 EU member states with a tool for implementing the obligations undertaken in the Kyoto Protocol. The fifteen member states of the European Union (prior to its expansion on 1<sup>st</sup> May 2004) undertook to reduce the total emission of greenhouse gases by 8% in comparison with 1990 before the end of the first period of execution of obligations set forward in the Kyoto Protocol, which covers the years 2008-2012.



The general reduction objective has been broken down into individual reduction objectives set for each member state under the “agreement on the sharing of obligations” (Council Decision 2002/358/EC). The majority of the ten new member states have their own reduction objectives set forward in the Protocol, amounting to 6% or 8%. The states are participants of the European Emission Trading System.

The Kyoto Protocol have been introduced to Community legislation as the Directive of 13<sup>th</sup> October 2003 (2003/87/EC). The objective of this document is to promote the reduction of greenhouse gas emissions in an economically justified manner. The new Directive has replaced Directive 96/61/EC. The need to improve the competitiveness of European companies with respect to their American counterparts made it necessary to find an alternative for limiting emissions in a less economical manner, i.e. through regulations and controls, which method had hitherto been applied in Europe. Basing on innovative mechanisms set forward in the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC): Joint Implementation (JI), the Clean Development Mechanism (CDM) and international trading in emissions, the European Union developed the first company-level international carbon dioxide trading system with the largest geographical coverage hitherto. The European Emission Trading System, which is the most important instrument of the European Union for combating climate change, was put into operation on 1<sup>st</sup> January 2005.

The table below presents a breakdown of CO<sub>2</sub> emissions for individual EU countries in 2003 and their relation to the Kyoto Protocol requirements. The information was presented on the basis of data published in January 2006 by the European Commission.

Emission allocations for individual countries do not fully cover their emissions, which is due to the fact that not all sources are included in the Emission Trading System. The table hereunder presents the percentage share of emission allocations for the period 2005-2007 in relation to the Kyoto limit for individual countries.

In Poland, the Emission Trading System was implemented by the Act of 22<sup>nd</sup> December 2004 on trading in allowances for the emission of greenhouse gases and other substances to the atmosphere, and by the appropriate regulations concerning related issues, such as: the allocation of emission



allowances for specific ETS periods, the list of installations participating in the System, and the conditions governing the monitoring, verification and reporting of emissions.

The basic tool aimed at systematically lowering CO<sub>2</sub> emissions is the allocation of emission allowances for specific ETS periods for installations covered by the System. The limits allocated for the first period (2005-2007) have been set forward in the Regulation of the Council of Ministers of 27<sup>th</sup> December 2005 on the adoption of the National Allocation Plan for the emission of carbon dioxide for the years 2005-2007 and on the elaboration of a list of installations temporarily exempt from the Community system of trading in emission allowances during the period commencing on 1<sup>st</sup> January 2005 and terminating on 31<sup>st</sup> December 2007. The total annual emission limit for Poland for the first period is 239,100 th. Mg. The cement industry received 11,326 th. Mg of allowances, which constitutes 4.76% of the total. The Polish Cement Association has been actively co-operating with the Ministry of the Environment in order to determine a limit that would fully cover the sector's needs for production-related allowances. Currently, work is under way on the elaboration of emission limits for the second ETS period, covering the years 2008-2012, and this should be completed in June 2006.

The second aspect of the System – equally important for the industry – are the guidelines

concerning monitoring, verifying and reporting CO<sub>2</sub> emissions, dated 12<sup>th</sup> January 2006. In European Union legislation, this area is regulated by the Decision of the European Commission no. 2004/156/EC of 29<sup>th</sup> January 2004 on the establishment of guidelines for monitoring and reporting on greenhouse gas emissions pursuant to the provisions of Directive 2003/87/EC of the European Parliament and Council. The system of administering emission allowances and monitoring and verification is based on very rigorous principles, which must be adhered to by each participating installation. The Regulation very precisely specifies requirements concerning the monitoring and calculation of emission quantities, the precision of measurements, data security and storage, and appropriate information exchange procedures. The Ministry of the Natural Environment has set up the institution of the National Administrator of the Emission Trading System, which is intended to manage authorisations and check the veracity of data. All of the installations covered by the System must annually submit to the Administrator reports concordant with the guidelines set forward in the Regulation and in permits issued (in the case of installation covered by integrated permits) by Provincial Offices. All of these installations must undergo verification by an accredited auditor at least once annually. The verification

Table 1

Country	Emissions in 2003	Kyoto limit	Emissions 2003/Kyoto
Lithuania	17,2	46,9	<b>36,7%</b>
Latvia	10,5	23,3	<b>45,1%</b>
Estonia	21,4	40	<b>53,5%</b>
Poland	384	531,3	<b>72,3%</b>
Hungary	83,2	114,3	<b>72,8%</b>
Slovakia	51,7	66	<b>78,3%</b>
Czech Republic	145,4	176,8	<b>82,2%</b>
Sweden	70,6	75,2	<b>93,9%</b>
France	557,2	568	<b>98,1%</b>
Greece	137,6	139,6	<b>98,6%</b>
UK	651,1	657,4	<b>99,0%</b>
Germany	1017,5	986,1	<b>103,2%</b>
Slovenia	19,8	18,8	<b>105,3%</b>
The Netherlands	214,8	200,3	<b>107,2%</b>
Portugal	81,2	75,4	<b>107,7%</b>
Belgium	147,7	135,8	<b>108,8%</b>
Ireland	67,6	61	<b>110,8%</b>
Italy	569,8	477,2	<b>119,4%</b>
Finland	85,5	70,4	<b>121,4%</b>
Spain	402,3	329	<b>122,3%</b>
Luxembourg	11,3	9,2	<b>122,8%</b>
Austria	91,6	68,3	<b>134,1%</b>
Denmark	74	55	<b>134,5%</b>
Cyprus	9,2		
Malta	2,9		

Table 2

Country	Kyoto limit	Allowances	Allowances/Kyoto
Latvia	23,3	4,6	19,74%
Lithuania	46,9	12,3	26,23%
Hungary	114,3	31,3	27,38%
France	568	156,5	27,55%
Sweden	75,2	22,9	30,45%
Ireland	61	22,3	36,56%
Luxembourg	9,2	3,4	36,96%
UK	657,4	245,3	37,31%
Poland	531,3	239,1	45,00%
Slovakia	66	30,5	46,21%
Belgium	135,8	62,9	46,32%
Slovenia	18,8	8,8	46,81%
Estonia	40	19	47,50%
The Netherlands	200,3	95,3	47,58%
Austria	68,3	33	48,32%
Italy	477,2	232,5	48,72%
Germany	986,1	499	50,60%
Portugal	75,4	38,2	50,66%
Spain	329	174,4	53,01%
Greece	139,6	74,4	53,30%
Czech Republic	176,8	97,6	55,20%
Denmark	55	33,5	60,91%
Finland	70,4	45,5	64,63%
Cyprus			
Malta			

includes all emission aspects: from the method of conducting measurements and calculating quantities of CO<sub>2</sub> emitted, and right up to an inspection of document veracity and data handling procedures. Ultimately, a negative verification results in the withdrawal of all allowances granted, and in practice this is tantamount to the discontinuation of production and payment of a fine. Penalties will also be imposed for each emitted tonne of CO<sub>2</sub> for which an installation does not hold an emission limit. During the first ETS period, these penalties will total 40 EUR per tonne, while in the second – 100 EUR; in addition, when paying a fine, the installation has to purchase the necessary allowance (cost in excess of 25 EUR per allowance).

The fulfilment of requirements concerning the emission monitoring and verification system is the most costly and laborious element of the entire Emission Trading System. Fulfilment of the entirety of requirements provided for the System has made it necessary for the cement industry and other sectors to incur considerable outlay and hire the services of specialists. Work on these issues has not yet been completed. In Poland, it is still necessary to ensure the conformity of laboratories, both commercial and industrial, with standard ISO 17 025, which come into force on 28 July 2007. It is also absolutely necessary to create a secure storage system for data that must remain within installations for a period of 10 years, and also to elaborate an efficient system for the exchange of data concerning purchased fuels, alternative raw materials and their credibility.

The cement industry, both in Poland and throughout Europe, supports actions aimed at reducing emission of greenhouse gases to the atmosphere, following the consideration and elimination of factors threatening the economic development and competitiveness of enterprises. The European Emission Trading System is a relatively new tool in Europe. It is very complex and much depends on the appropriate designing of its component mechanisms. A very important problem from the point of view of competitiveness is the fact that for various sectors the share of costs of participation in the system (including the costs of purchasing allowances) in their turnover or manufacturing costs is very different. This system most strongly influences the power engineering industry and sectors with large energy requirements, such as the cement sector. The influence on other sectors is considerable.



rably smaller. However, it does not include sources having a considerable share in the emission of greenhouse gases, such as transport or households. The costs of the system will also be incurred by installations and manufacturers which are currently not participants (e.g. non-ferrous metal plants). In addition, we should keep in mind the relevant matching of reduction objectives to emission values for individual sectors and Europe on a global scale (global emissions of CO<sub>2</sub>). The reduction of emissions of greenhouse gases solely within the European Union, without the active participation of other countries, would constitute an insignificant contribution to any intended limitation of the negative influence of these gases on the climate, and also – potentially – hinder the development of industry in Europe, even leading to a situation where production would be transferred outside of countries covered by the system. Thus, particular

attention should be paid to solutions such as the JI and CDM projects, which make it possible to introduce actions aimed at reducing emissions in countries outside of the EU. The first period of the system (the years 2005-2007) has already commenced. Work aimed at bringing the EU towards the second period (2008-2012) is continuing apace. We hope that the creators of the system and institutions working on its development will arrive at solutions leading to the gradual reduction of emissions in Europe, and ultimately the lowering of global emissions, without increasing costs or raising any new barriers to economic development.

Allocation of CO<sub>2</sub> emission allowances for the years 2005-2007 for industrial sectors in Poland

