

## LEGAL ASPECTS OF GLOBAL WARMING REGULATION

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### Introduction

Global warming is a phenomenon that can be considered as one of the most significant from the environmental protection point of view because of its overwhelming nature. The increase of the average temperature of the planet has immense consequences not only with biodiversity, but also water supply, weather patterns and social and economic conditions all over the world. The temperature rise predictions vary and thus the uncertainty in scientific explanation and assessment of the problem had formerly led to different opinions on the issue.

A political consensus was reached in the conference held in Rio de Janeiro in 1992, where parties to the Convention on Climate Change expressed the aim of their common effort as "the stabilization of greenhouse gases<sup>1</sup> concentrations in the atmosphere at the level that would prevent climate change". Although it was a framework convention it did not bring any specific greenhouse gases reduction requirements. Participating states obligated themselves to prepare national inventories of greenhouse gases sources and sinks and to elaborate national action programs. Further obligations addressed development of ecosystems as greenhouse gases sinks, support technologies for emission reduction, monitoring, research, information exchange and cooperation. Further development<sup>2</sup> aimed at finding the way to reduce greenhouse gas emissions, since the parties agreed to set emission limitations in the Kyoto Protocol in 1997. The aim of emission reductions should be reached in the period of 2008-2012. Year 1990 was designated as the baseline year.

The Kyoto Protocol commitment brought mechanisms to reach its goal in the form of free trade in emission allowances, joint implementation

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<sup>1</sup> Greenhouse gases means Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Sulphur hexafluoride (SF<sub>6</sub>), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), 21.12.2008,

<http://www.climatechangeconnection.org>

<sup>2</sup> Conferences of Parties to the framework Convention on Climate Change were held in Berlin 1995, Geneva 1996, Kyoto 1997, Buenos Aires 1998, Bonn 1999, Hague 2000, Bonn 2001, Marrakesh 2001, New Dehli 2002, Milano 2003, Buenos Aires 2004, Montreal 2005, Nairobi 2006, Bali 2007, Copenhagen 2009; 21.12.2008 at: <http://unfccc.int>; <http://undp.org>; <http://www.env.cz>

mechanisms, clean development mechanisms and land-use, land change and forestry as mechanisms enabling the consideration of vegetation functioning as greenhouse gases sink. Even though majority of countries supported the Kyoto Protocol, the USA refused to accept the reduction obligations and asserted, instead, to invest in new technologies.<sup>3</sup>

Active approach taken by the European Union (EU) has led to enacting several documents addressing global warming. These are Directive 2003/87/EC, establishing a scheme for greenhouse gas emission allowance trading within the Community, as amended, and Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases aimed directly at emissions reduction. As far as global warming is closely connected to exploitation of natural resources and energy production and use, Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services, Directive 2002/91/EC on the energy performance of buildings and Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market are equally important.

EU member states can use different legal instruments to transpose those directives. The aim of this contribution is to present various regulatory tools used to reduce greenhouse gas emissions, particularly in the Czech Republic, and to outline not only its benefits, but also barriers to its effectiveness and its deficiencies. At the global scale, the Czech Republic, with 146 million tonnes of CO<sub>2</sub> equivalent, annually ranks 35th by the absolute amount of greenhouse gases, with approx. 0,3 percent of total global emissions. Nonetheless, in relation to the amount of emissions per capita or gross domestic product (GDP) unit, it is one of the countries with the most emission intensive GDP production.<sup>4</sup>

## **I. Regulatory instruments at the national and EU law level**

### **I.1 Greenhouse gases emission limitation**

Based on the Kyoto Protocol, each party listed in Annex B has assigned amounts of greenhouse gases that it had committed not to exceed in the commitment period 2008 to 2012, so that overall emissions of such gases should be reduced by at least 5 per cent below 1990 levels. According to the Annex B, the Czech Republic should reduce its overall greenhouse gas emissions by 8 percent. In 1990, its aggregate greenhouse gas emissions were 196,2 Mt. To meet the 8 per cent Kyoto commitment, the emissions should be reduced to 180,6 Mt, however, in 2004, the aggregate greenhouse gas emissions were only 147,18 Mt.<sup>5</sup> For the Czech Republic, as for most of

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<sup>3</sup> Němec, P.: Kjóto se podařilo v Bonnu zachránit, *Hospodářské noviny*, 24.7.2001, s. 5

<sup>4</sup> Zámyslický, P.: Politika ochrany klimatu v České republice, <http://www.casopis.ochranaprirody.cz/zvlastni-cislo>, p. 9, 15.12.2009

<sup>5</sup> Národní alokační plán České republiky 2008-2012, <http://www.env.cz>

Central and East European countries, the Kyoto target can be met without active climate protection due to the fact that their national economies underwent fundamental restructuring as a result of economic transformation. Former industrial polluters either closed down or converted production to more recent low-emission technologies.<sup>6</sup> Thus, the Czech Republic already exceeded its individual commitment under the Kyoto Protocol.

As the new EU member state, the Czech Republic is not subject to Decision 2002/358/EC concerning the approval of the Kyoto Protocol. On the other hand, it is obliged to participate in the EU Emission Trading Scheme (EUETS).<sup>7</sup> The aim of the EUETS is to help EU Member states achieve compliance with their commitments under the Kyoto Protocol. Letting participating companies buy or sell emission allowances means that the targets can be achieved at a minimal cost.<sup>8</sup> The basic tools of emission limitation are national allocation plans (NAP) through which allowances are distributed. The quantity of allowances a Member state may issue is governed by 12 criteria. The "Linking Directive" 2004/101/EC amending Directive 2003/87/EC has added an additional criterion that requires each plan to state how many credits from joint implementation (JI) and Clean Development Mechanism (CDM) projects the plants covered by the allocation plan are permitted to surrender for compliance in the second trading period. The Directive does not explicitly prescribe a given number of allowances, but each Member state must respect criteria.<sup>9</sup> The allocation plans are assessed by the Commission. Based on the assessment, the plan can be accepted unconditionally, approved conditionally or rejected/partly rejected. In each case of conditional approvals, the Commission indicates steps that need to be taken by the Member state to make the plan fully acceptable.

The EUETS comes out of the former concept of "bubbles"<sup>10</sup>, which is working quite effectively to reduce emissions of sulphur oxides in the USA for many years. Using this system of regulating greenhouse gas emissions requires consideration of many factors, which are basically reflected in those criteria mentioned above. Therefore, the national allocation plans are assessed not only from the aspect whether the emission levels will enable the Member state to meet Kyoto targets. There are also other criteria that seek to ensure non-discrimination between companies and between the different sectors as well as compliance with the EU's competition and state aid rules.

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<sup>6</sup> Zámyslický, P.: Politika ochrany klimatu v České republice, <http://www.casopis.ochranaprirody.cz/zvlastni-cislo>, p. 9, 15.12.2009

<sup>7</sup> Based on the Kyoto Protocol requirement, the overall amount of allowances to emit greenhouse gasses set by the National Allocation Plan equals to 101,9 millions. In: Národní alokační plán České republiky 2008-2012, <http://www.env.cz>

<sup>8</sup> Questions and Answers on Emission Trading and National Allocation Plans, p. 1, <http://europa.eu.rapid/pressReleasesAction.do?reference=MEMO/05/84...>, 15.12.2009

<sup>9</sup> Questions and Answers on Emission Trading and National Allocation Plans, p. 2, <http://europa.eu.rapid/pressReleasesAction.do?reference=MEMO/05/84...>, 15.12.2009

<sup>10</sup> J.H.Dales had proposed to use tradeable allowances to regulate pollution already in 1968.

Other criteria relate to provisions in the plan for new entrants, the accommodation of early reduction efforts and clean technology. The additional criterion brought by the "Linking Directive" (mentioned above) requires each plan to state how many credits from JI and CDM projects the plants covered by the allocation plan are permitted to surrender for compliance in the second trading period. The assessment seems to be quite complicated, hence the Commission's powers to assess and reject national allocation plans are strongly limited. Moreover, each NAP rejection must be reasoned accordingly. That is why some Member states succeeded in cases decided by the ECJ.<sup>11</sup> The Czech Republic submitted its own similar complaint and, despite the previous intention to withdraw it, decided to continue with the court case. From this point of view, the centralization of allocation plans in hands of the commission for the next phase of the ETS is a logical outcome ending the system of national allocation plans.<sup>12</sup>

The aggregate amount of allowances issued in the scope of the EU and individual member states seems to be one of the problems of EUETS. In the first period, 2005 to 2007, the price of allowances decreased rapidly from 31,- EUR per tonn of CO<sub>2</sub> in April 2006 to 10,- EUR and 4,95 EUR in the beginning of January 2007. The drop was caused by the fact that some European countries did not use the assigned emission limits. The drop in the price of the emission allowances was caused by warmer weather and lower gas prices, in addition to their supply significantly exceeding the demand.<sup>13</sup> It is probable that the amount of allowances distributed to polluters was even higher than they have actually needed. Therefore, they did not have to buy allowances for excessive pollution, and their price dropped by 85 per cent.

The ETS and the way the allowances are being distributed were criticized by the former chairman of the Czech Office for Competition Protection, Mr. Martin Pecina. According to him, the allocation of emission allowances exceeding the actual need of polluters can be considered to be a public subsidy. It is against competition rules that the unsuccessful enterprise reduces its production and sells the superfluous allowances to a profitable firm and thus it earns money.<sup>14</sup>

The insufficient emission limitation and the allowances allocation are problems existing not only at the European, but at the national levels as well. The allocation is strongly influenced by lobbying and the trading systems aimed at the new clean technology support enable speculative behaviour and market distortion. The serious shortcoming of the scheme proved to be the

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<sup>11</sup> One of the most recent are cases T-183/07 Poland v. Commission and T-263/07 Estonia v. Commission decided in September 2009. Similar action was filed by the Czech Republic on 4th of June 2007.

<sup>12</sup> Phillips, L.: EU court slaps down Brussels attempts to lower eastern CO<sub>2</sub> emissions, <http://euobserver.com/885/28710?print=1>, 15.12.2009

<sup>13</sup> Aktuálně.cz, <http://www.aktualne.centrum.cz>

<sup>14</sup> Rozhovor s Martinem Pecinou, Euro 1, 2. ledna 2007, p. 47

impossibility of transferring unused allowances issued in the first trading period to the consequent one.

In some developed countries, the introduction of an authorization requirement for carbon dioxide emissions was conceived as an intrusion into the basic right of economic freedom. Some have argued that property rights are also affected, arguing that the possibility to burn fossil fuels and emitting CO<sub>2</sub> is part of the assets of an industrial installation.<sup>15</sup> In the Czech Republic, this debate was not carried out because of the different conception of this right. During the previous centrally planned socialist economy, installations became accustomed to the idea that some natural resources are owned by the state and, therefore, the system of fees requiring polluters to pay for each unit of polluting substance emitted into the environmental components has been accepted in the past quite easily, even though fees were imposed on, for instance, methane and not on CO<sub>2</sub> emissions. Introduction of a tradeable allowances scheme was accepted as a new economic tool and, along with the permit to emit greenhouse gases, is considered to be in harmony with the Charter of Basic Human Rights, setting the possibility to limit economic freedom for the sake of public interest matters. On the other hand, the question of the principle of equal treatment could be raised in the Czech Republic in relation to tradeable allowances allocation and subsidies obtained by certain companies. To avoid negative effects mentioned above, the ETS should be based on clear and transparent rules.

Better results could be achieved by participation of all players in the combat with global warming. Directive 2003/87/EC as well as Czech national legislation cover certain sectors of the economy. Not only all sectors of the economy should contribute to emission reductions, but consumers' behaviour should be influenced through education in addition to indirect effect of economic tools. Beside that, for sectors not subjected to the emission trading regime such as households, small businesses, transportation and services, a wide spectrum of regulatory devices is available, including command and control measures. Member States should implement additional policies and measures in an effort to further limit the greenhouse gas emissions from sources not covered under Directive 2003/87/EC.

The opinion that the present emission limitation is not sufficient to reverse the global warming and that a lot has to be done is clearly expressed by the Directive 2009/29/EC amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community. Similarly, the Copenhagen Convention proposal called for 50% reductions against the baseline year 1990 worldwide; developed countries should contribute 80% reductions. Even though participants of the conference agreed to the necessity to halt global warming, funding such investments became the crucial point precluding any definite obligation.

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<sup>15</sup> Winter, G.: Legal aspects of climate change, in particular, emission trading mechanisms (european and national perspectives), <http://www.avosetta.org/>, 20.12.2009

## **I.2 Joint Implementation and Clean Development Mechanism**

The Directive 2003/87/EC did not link EUETS to emission credits under the Kyoto Protocol. It therefore did not allow Emission Reduction Units (ERUs) or Certified Emission Reductions (CERs) generated by Joint Implementation or Clean Development Mechanism Projects respectively imported into the EU to be converted into EU allowances. To remedy this, in September 2004 the EU adopted a directive to amend the EUETS to link the scheme to emission reduction units that comply with the Kyoto Protocol. The Directive, which is known as the "Linking Directive", aims to decrease the costs of compliance with the Kyoto targets in Europe through the use of the credits generated by the Kyoto mechanisms.<sup>16</sup> The linking of the EUETS with the flexible mechanisms defined in the Kyoto Protocol has a potential to alleviate the burden of EU climate policy on polluters. But given the complicated procedures foreseen on the international, EU and national levels and a number of quantitative and qualitative conditions relating to the way the Kyoto units can be converted into EU allowances, the transactions seem to be too demanding and costly.

## **I.3 Best Available Technology (BAT) Requirement**

"Best available techniques mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole." This definition is contained in the Directive 96/61/EC concerning integrated pollution prevention and control which is based on the BAT requirement in combination with the integrated permit. This Directive provides that installations be operated in such a way that all the appropriate preventive measures are taken against pollution, in particular through application of the best available techniques and efficiently-used energy as the general principles governing the basic obligations of the operator. Energy industries and, especially, combustion installations with a rated thermal input exceeding 50 MW are listed among installation within the scope of the IPPC Directive.

Fluorine compounds are indicated as one of the main polluting substances to be taken into account if they are relevant for fixing emission limit values under the IPPC Directive. At the same time, sulphur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) have relatively high global warming potential and therefore contribute to global warming. Although the IPPC provisions relate to global warming, they were not aimed

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<sup>16</sup> Streck, Ch., Freestone, D.: The EU and Climate Change, in Reflection on 30 Years of EU Environmental Law. A High Level of Protection?, Eds. R. Macrory, Europa Law Publishing, Groningen 2006, p. 105

to it, inasmuch as CO<sub>2</sub> is not listed among main polluting substances, and the basic obligation of the IPPC system is to ensure energy efficiency. Moreover, the emission allowance scheme and the BAT approach under the IPPC Directive 96/61/EC somewhat conflict with each other. If BAT is taken seriously, no further reduction of greenhouse gas emission is possible, at least for new installations. The remaining emissions could be priced but only as a compensation for the consumption of a common good rather than with a view to provide an incentive for further emission reduction. The controversy is solved by the Article 26 of the Directive 2003/87/EC, which provides that permits under Directive 96/61/EC shall not contain emission limit values for greenhouse gases when the installation participates in emission trading, which is, in fact, a departure from the BAT approach.<sup>17</sup> The Czech legislation is consistent with it, and since the lists of power generation industry activities under the IPPC Act<sup>18</sup> and under the Act on Conditions of Trade in Greenhouse Gas Emission Allowances<sup>19</sup> are overlapping, those installations are regulated only by tradeable allowances. If enough allowances were allocated to its operator, an installation which was authorized without CO<sub>2</sub> emission limitation requirements specified in the IPPC permit is allowed to emit greenhouse gas without any restrictions.

#### **I.4 Regulation of hydrofluorocarbons**

In the nineties, hydrofluorocarbons (HFCs) were introduced to substitute chlorofluorocarbons (CFCs) for their ozone-layer depleting potential. HFCs are used worldwide and some of them have many times higher global warming potential than CO<sub>2</sub>.<sup>20</sup> In EU Member states, these greenhouse gases are regulated directly by Regulation 842/2006. The regulatory instruments encompass bans on placing selected products on the market, limitation of HCFs use and its leakages, detection systems, regular maintenance of products and objects containing HCFs, specific disposal requirements related to products and objects containing HCFs, authorization requirements to carry out certain activities, reporting requirements and others.

As can be seen, mostly instruments of direct regulation are used to regulate HFCs. Since they are almost identical with those used to regulate ozone layer depletion in Regulation 2037/2000/EC, the joint legislation was passed to enforce both EC Regulations in the Czech Republic.

#### **I.5 Energy efficiency and renewable sources of energy**

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<sup>17</sup> Winter, G.: Legal Aspects of Climate Change. In particular, emission trading mechanisms (european and national perspectives) - Report on Germany, <http://www.avosetta.org>, 20.12.2009

<sup>18</sup> Act No. 76/2002 Coll., on integrated prevention and pollution control, as amended

<sup>19</sup> Act No. 695/2004 Coll., as amended

<sup>20</sup> <http://www.climatechangeconnection.org>, 27.12.2007

Promotion of public transportation, building of wind mills and passive houses, and financial incentives for energy efficiency practices are the other instruments in the fight against global warming.

At the EC law level, several important documents were accepted in this field, such as the Council Directive 93/76/EEC of 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency (SAVE), Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, and the Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

At the national level, direct regulatory instruments can be used to achieve the goal, such as to prohibit production of electric light bulbs due to their low efficiency. Prevailing indirect economic tools of regulation are represented mainly by government subsidies, grants and other forms of public financing. Polluters investing into technologies using renewable sources of energy are eligible to acquire a subsidy. In practice, situations occurred when polluters spared tradeable allowances which were marketed according to the ETS based on previously subsidized investments. In result of that legislative overlap, the polluters obtained payment for emission reduction twice. Beside that, the development of subsidized technologies using certain renewable sources of energy (especially wind and solar energy) created another problem in the Czech Republic. The electricity produced by those installations poses a serious threat of a possible collapse to the existing electrical transmission systems which are not adapted to fluctuated electrical energy supply.

### **I.6 Enforcement**

The impairment of rules regulating the trade in emission allowances as well as regulation of HCFs contained in the EC regulation is covered by a system of fines and other sanctions that can be imposed for the breach of the law according to the national legislation. The ETS implies big differences in tax deductibility of fines for the breach of the emissions limit. In some countries, fines are a tax deductible expense, in others they are not. This can lead to the market distortion, because in those countries, it pays for some polluters not to buy allowances but to pay a fine for non-compliance with the emission limitation.

### **Conclusion**

It is obvious, that global warming represents a serious problem. There are different approaches and regulatory techniques that can be used by the legislative bodies to contribute to reduction of greenhouse gasses. The ETS is a very ambitious program, but without global accord among states, the problem remains. However, although it is generally agreed that global warming is influenced by human activities, there is no consensus on the



possibility and ways to reverse the trend and at whose expense. By establishing the ETS, the EU clearly expressed preference of an economic approach instead of command and control regulation with the aim to invest money in emissions reduction in the most effective way. The complexity of the problem with a global dimension and relatively complicated legislation to regulate emission trading among states implies certain shortcomings that have to be resolved.

Besides the economic device, command and control approaches in combination with investments in new technologies appear to achieve good results. The best available technology requirement along with setting the greenhouse gas emission limitation should be enlarged to at least new installations under the IPPC regime and even to those which are falling outside its scope. Direct regulatory approaches can be used for permitting activities accompanied by deforestation of larger areas, along with the fee imposition for the loss of the forest land.

Promotion of new energy efficient technologies and use of renewable sources of energy represents another contribution to greenhouse gases emission reduction. Beside the industry, other sectors such as small businesses, services, households, transportation should be addressed by additional policies and control measures. The most difficult task is the change of our common values.

