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# The legislative evolution in the European Energy Policy

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## INTRODUCTION

The European Union did not exercise any power on energy policy for a long time. This gap led to the paradox of a process of European integration on the basis of energy (the CECA Treaty and Euratom) that after 50 years still has no real powers in that field. However, since the '90s, energy issues have merged strongly in the Community agenda with a gradual process that led this policy to the center of the European strategy for the future.

The intention of this paper is that to examine the details of energy issues in the process of European integration in order to understand why it was not possible to create such a policy, how it has been included in the European agenda and finally try to understand what might be the future prospects for the creation of a new generation of energy policy.

## 1. EU PRINCIPLES ON ENVIRONMENT AND ENERGY

Firstly, it is necessary to analyze the historical and structural conditions, as well as the geopolitical ones, which led to the birth and formation of the European Community. A particular focus on the economic dynamics of the founding members. Among the three original Treaties, the European Coal and Steel Community of 1952 and the 1957 European Atomic Energy Community (EURATOM), were entirely devoted to two energy sectors. The most important one was 1957 European Economic Community (EEC), which contained no provision on energy. The need to develop a common energy policy showed only with the oil crisis of 1973, which revealed in alarming terms the Community's dependence on imported energy from abroad. In the mid-70's resolutions and recommendations were adopted by the Council to set common goals and guidelines for the convergence of national energy policies. These are examples of soft law able to provide an initial approach in the EU, compared to the need for community strategies for the future structure of energy. The Treaty of Maastricht in 1992 will expressly give the power to adopt "measures on energy" (Article 3, Tr. EC).

The theoretical assumption outlined in the analysis of this thesis is that European integration derives from a series of rational choices made by governments intent on pursuing their own interests and thus able to proceed only when the preferences of States have failed to converge. Some assumptions are necessary to explain the methodological complexities that arise in trying to analyze the energy policy. The first problem is semantic, while the second is methodological and legal. At the semantic level, "Energy Policy" can have different meanings depending on the matters on which it operates. In fact, the same meaning may refer to very different contexts, for example, you may refer to the Energy policy by talking about policies to establish efficiency standards for refrigerators, as

well as strategic mechanisms related to international relations between states. In order to provide a definition of the energy policy, it is appropriate to distinguish between official and unofficial policies of the energy sector. The first case defines the strategy, drawn up clearly and explicitly by the government to manage the energy balance for the present and future needs. On the second hand, it refers to all those policies that affect energy fields, either intentionally or accidentally. This distinction is particularly relevant in the EU context, because if it might seem obvious that there is no official European energy policy, though it is recognized that energy issues fall within the framework of policies in relation to the market, the environment, foreign policy, transport, research (to name only the most significant). In addition to the semantic problem, several others come out considering the theoretical approach to be taken to proceed in the analysis of law. As stated initially, the main objective is to understand both the reasons for the absence of energy policy, and the process that led to the progressive scheduling in the agenda of the Council of Europe. These trends, though related, are difficult to be analyzed using a single theoretical approach.

This problem calls for a debate on the theories of European integration and the question that seeks to determine whether the theories are in competition with each other or whether different perspectives and theoretical approaches are mutually complementary. It seems more convincing the argument of those who say it is not possible to use a single explanatory theory. The integration theories try to explain and predict the development of a complex phenomenon such as European integration, but may differ among themselves depending on the purpose: some theories focus on the dynamics of the political process and institutions; others on its operativity (on issues related to the polity); but others analyze the results and outputs, considering the regularity in the actions and interventions (policy); while others attempt to identify the dynamics of political decision-

making, the role of institutions and interest groups (politics). We can say that some theoretical approaches are best suited to find the explanatory key while others are more suitable to describe and analyze how a process takes place. Clearly, analyzing the outcome of the integration policies of Member States is different from the analysis of the institutional formation of the European Union and therefore we should refer to different theories. Following these assumptions it is clear that to analyze the reasons of the failure of energy policy we can't refer to the same scheme of analysis. In the first case, we should find a macro point of view and an explanatory theory (such as the neo-institutionalist theory or the intergovernmentalistic one) to try to understand what were the obstacles to the integration of energy policy. In the second case we should instead enter the path of policy that occurs every day to understand the process and put on the agenda of the variables of a problem. Adopting different approaches it can be developed even further insight the integration process, highlighting both the dominant role of governments in the nation negotiating process and the daily road of European policies.

What are the reasons for the failure of the European integration process in developing a common energy policy in the period from 1952 until the adoption of the Treaty of the European Union in 1992? At the end of that period there is no treaty where can be found an explicit reference to energy policy, and then, before trying to understand the outlook for this policy in the future, it is legitimate to ask what has gone wrong in the past. It is definitely to keep in mind the role of states in deciding the integration of Community policies. The state interest is, in fact, easily identifiable in a policy where national governments retained direct control over production the supply and distribution of energy sources. To explain the formation of national preferences, two are the possible origins to be considered: the economic and geopolitical interests of states. Geopolitical interests

concern the threats either to the sovereignty or national territory, both militarily and economically. Economic interests reflect the imperatives of interdependence instead of business and, therefore, consider opportunities for trade and capital between nations. The key question that the analysis should try to answer on this point is to understand what is the actual weight and nature of economic and geopolitical interests in determining the preferences of states in the process of European integration. The second step instead investigates the relationship of the states with the EU to defend its own national preferences when they are traded on the EU proposals, the survey seeks to understand the balance of power of state actors and at the same time it questions about the influence on the part of supranational actors in the process of formation of agreements and legislative proposals. The first structural actions in the energy sector in Europe dates back, then, to 'early '90s and is purely sectorial. They fit in this context, Directive No 1990/77/CEE, which requires transparency of prices and sales conditions, for both gas and electricity; 1990/547/CEE Directive, which regulates the transit of electricity grids of high-tension transmission, for electricity and high pressure gas; 1994/22/CEE Directive which requires the elimination of public monopolies on the prospecting, exploration and production of HC and require competitive procedures for the release of its authorization and licenses. But it's only with the approval of the first directives on liberalization and harmonization that a more comprehensive EU energy policy in the knowledge that the main obstacles to the free movement of electricity and gas, and thus the creation of a common market of energy, they are hindered by the Member States. It is clear that, even when there are no technical impediments to the introduction of competition in some segments of the energy chain, Member States still tend to focus on national public enterprises, often protected through the provision of public monopolies, and thereby prevent entry into the private sector, both domestic and foreign, even though more efficient,

and therefore able to provide the same service on terms more advantageous for the user.

Single market and competition are therefore essential components of the Community policy on energy. But they are not alone. Another aspect that is of considerable importance is the security of supply. As outlined in a Commission working paper, Annex to the 2006 Green Paper on "A European Strategy for Sustainable, Competitive and Secure Energy", the EU meets its energy needs with oil and gas imports and 61% for the 80% of the first and 54% in the second. The rest of the consumption is covered by 18% from coal, nuclear for 15%, to 6% from renewable sources ie hydroelectric power, solar and wind power. According to current trends, it is expected that by 2030 the dependency on energy imports will rise from 50% to 65% of total European consumption. There are two bodies that deal with collect energy consumption data to predict current and future: EIA (Energy Information Administration) and the IEA (International Energy Agency). Their sites are published annually in the various documents that show the current conditions and various considerations on possible future scenarios. Globally, under certain macroeconomic conditions, in terms of total energy consumption is expected to increase from 10,602 Mtoe in 2003 to 14,100 Mtoe in 2015 and finally to 18,200 Mtoe in 2030, an increase of nearly 2% annually. This scenario of course does not take into account any technological leaps that make available alternative sources at competitive prices. It follows, therefore, a problem of energy dependence. One of the strategic issues for the EU to achieve its ambitious targets on energy-environment and energy efficiency. It is, in particular, felt that the EU has the capacity to save up to 20% of its consumption in a cost-efficient, ie no extra net cost. Despite significant investments necessary to achieve the desired potential savings, these investments would cause attractive returns in the short term, both in terms of increased employment and competitiveness, both in terms of better living conditions for citizens of

the Union itself. The key to understand the fundamental skills is offered by the Community legal framework in the energy shown in the consolidated Treaty, as at article 194 of the TFUE. With this section of the legislation are set the primary priorities of energy policy at both central and local ruling principles and objectives which have developed in practice over the years (presented in chronological order). One of these priorities is therefore to have tools to deal with the risk of any reduction or even interruption of supplies of oil and gas from abroad. In this fits the measures and proposals to encourage energy saving, diversifying energy sources and increasing use of renewables, to invest in generation capacity to meet peaks in demand, and strengthen networks of trans-European energy.

It is indeed the Treaty itself to prescribe the creation and development of trans-European energy networks (Article 154), in order to allow businesses and citizens "to benefit fully from the advantages deriving from a single area without internal frontiers "(so-called economic and social cohesion). This is possible because the trans ensure adequate availability of power even more disadvantaged and peripheral areas and allow optimum use of production facilities and infrastructure located within the Union. The Community energy policy is closely linked with the last of environmental protection. The bulk of environmental regulations are adopted, because the objectivity of the problems of transnational regulations and directives (sources in the technical sense). The environment as a sector and as a policy is not of exclusive competence of the European Union. The criterion in order to which is distributed competence in matters such as the environment, which goes to "competition" between Member States and 'the European Union, is given by' Single European Act (1986) which identifies, in relation to 'environment and only for the environment, the principle of vertical subsidiarity, which applies to discriminate, to distribute responsibilities between Member States and the Union in matters of non-exclusive jurisdiction of the latter: so-called "Principle of conferral." It

should be noted that until 1986 the environmental protection was neither exclusive jurisdiction nor competence of the Union (as it later became). One wonders how they have been found, by the then European Community, the legal basis on which to legitimate the European policies of environmental protection. In 1970 the first programs were initiated. There were actions and policies on the environment by the European Community on the basis of two standards:

a) Article 100 which made reference to the policies of harmonization of the laws of the Member States;

b) The former Article 235 on so-called implied powers, which states that although there is a skill numbered headed to the European Community, was still possible, even necessary, to initiate policies that would at any rate necessary to achieve the aims of the European Union and then as an implicit power to which belonged to communities still have to meet targets to get the relevant community.

The Single European Act to the Treaty of Lisbon has been made a kind of revolution in the system of European values, in the sense that the environment is at the center of buoyancy model of interests and values with eight rules. At the international level, things had changed and the environment was taken as the fundamental objective with which the international community had to confront. So not surprising if the European Union has warned over the years, the need to move to a formal codification of the value and environmental policies as a community task though as a shared competence. In fact, art .3 where the Treaty lists the policies on which the 'European Union must intervene compulsorily, confirms the need to initiate policies in the field of environmental protection (letter l). The bed. u) but confirmation of the parallels between the environmental policies and those of energy (measures on energy, civil protection and tourism). With this, the principle of allocation (as is now called the Lisbon Treaty to the

ancient principle of legality) is directly based. Article .5 Treaty (now Art. 3-ter with the Lisbon Treaty) establishes the principle of subsidiarity. Article .6 instead is of primary importance because it introduces the so-called principle of integration: "The requirements related to environmental protection must be integrated into the definition and implementation of Community policies and activities referred to in Article .3, in particular with a view to promoting sustainable development." This is a standard programmatic, someone from the cultural point of view also believes that it is outdated and that we should not talk about development but sustainable future, as this concept better explain why the rights to the environment, as well as to healthy environment 'healthy environment, renewable energy are the rights of third, fourth generation that the "status quo" that must be preserved over the years so that each generation to the next generation will leave the environment in the same state in which the received . The concept of sustainable development, on the contrary, there is a different philosophy of values, environmental policies must be designed to control technology. So sustainable development is given by appropriate policies to control technology rather than canceling them. Even and especially in the energy sector. It is a modern formula that speaks of a sustainable future, but suggests that there is a preliminary question: What kind of development we want? Must be unrestricted, or there are limits because otherwise the future of humanity could be compromised? Sustainable development is seen as a goal towards which they must help all Community policies, which must be integrated into policies for environmental protection (the principle of integration). Taken literally, this principle should mean, and mean that when policies are activated in different areas, these should be integrated and reprocessed according to the objective of sustainable development. This means that the environment can be considered, in terms of values, in an order (and even into Europe) as a sort of general value to which others are linked. In terms of

established ethical values is not a quantum leap minor change from one situation to a situation of legal wilderness strong affirmation of the strategic value, the absorbent environmental protection. In the Treaty at article 191 there is the provision of the operative applications: "It helps to achieve" because it is a matter of exclusive Community competence. It was in this standard the anthropocentric perspective (health) and eco-centric approach (environmental quality).

In these standards we have perhaps a confirmation: a concept of the environment is not legally appreciated anywhere. The quality of the environment and 'prudent use of resources are not defined from a legal standpoint. This is the weakness of the rules above. This is certainly a basic rule, a rule that establishes the program that it will help to achieve goals of environmental protection healthy, wholesome environment and that the community has a subjectivity of international law helps to determine solutions internationally of environmental protection policies. In this context, harmonization measures answering environmental protection requirements shall include, where appropriate, a safeguard clause allowing Member States to take, for environmental reasons, not economic, provisional measures subject to a Community procedure control. "Aim at a high level of protection" really means that you set up a medium level of protection, the best derogated by the Member States but may not deviate downward without prior authorization of the European Union that eventually gives the time of transaction . However, we aim at a high level of protection, however, directed with an eye to possible differences, peculiarities and also regional imbalances. In the Treaty for the constitution rejected by French and Dutch referendums had skipped the "well" and the "polluter pays". A closer look where you list the principles of precaution, prevention, correction of priority to the source as well as the "polluter pays" principle, it seems that an assessment based on common sense, before the law, a technique, a security model Environmental work proactively to

avoid or at least as much damage (correction to the source) or results in a protection operating purely ex post compensation. The precautionary principle is related to the concept of attention that, classically, is a principle that is derived from international law, international law is already in the environment before the Single European Act (1986), such as the Convention on the North Sea , Conference of Stockholm (1972-73), the Rio Conference. At Community level, the precautionary principle has become a general rule of action of reflection, not only the conformation of the Community policies on the environment but in many other areas such as food, medicines, etc.. In this perspective has been drawn up on February 2nd 2000, a European Commission Communication on the precautionary principle and are attached to this even the most important judgments up to that date had been issued and that they object to various events such as mad cow disease, protection of wildlife (especially birds). It is not contemplated, however, the Greenpeace regarding the matter of genetically modified and is given by the Court of Justice in the Court House. This ruling is a real "treatise" on the precautionary principle as well as on the principle of co-decision powers in cases of both Community and Member States. The Communication from the Commission says that "the precautionary principle is not defined by the Treaty, which prescribes it only in reference to environmental protection, but in practice its scope is much wider, and it applies in all cases in which a preliminary objective scientific evaluation does not say that there are reasonable grounds for concern that potentially dangerous effects on the environment and human health, animal and plant health may be inconsistent with the high level of protection imposed by the community. " The precautionary principle should be considered within a structured approach to risk analysis. It comprises three elements:

-Evaluation

-Management

-Risk, Communication.

The implementation of a strategy based on the precautionary principle should start with a scientific evaluation, as complete as possible, identifying at each stage the degree of scientific uncertainty. It is a little 'hazy definition of risk and its difference from that of uncertainty. The uncertainty gives an idea of what is not measurable, the risk of development concerns and uncertainty for no one will assure you, it happens differently if the risk is quantifiable, measurable and in some way predictable. Those responsible must be aware of the degree of uncertainty attached to the results of the evaluation of available scientific information. In some cases, when this structured approach to the analysis of the risk that the evaluation, management and communication has taken place, the right answer may be inaction (zero option) or at least the decision not to adopt legally binding measures ( soft-law). Finally, if it is deemed to act, the measures based on the precautionary principle should be: proportional to the level of obligation of protection (as determined by the last art.5 Treaty:

"the action of the community does not go beyond what is necessary to achieve the objectives of this Treaty "), non- discriminatory in their application (you can instead focus on Tom Dick), consistent with similar measures already arranged based on an examination of the potential benefits and care of the action and ' inaction (including cost / benefit analysis where this is possible) to be reviewed in the light of new scientific data and capable of assigning responsibility for producing the scientific evidence necessary for a more complete risk assessment.

"Subject to review" tells us that the precautionary principle introduces a setting of maximum flexibility in line with the provisional and the continuing evolution of science and technology. And 'then a principle of maximum flexibility, which is to substantiate the principle of prevention. Prevention will be built based on the data that the correct use of the precautionary principle offers. The latter as a strong principle, as a rule of law, is at the strategic center of environmental protection policies of the European Union and not only this. If you can see the rules of openness of the legislative decree. 4 / 08 that corrects the dl 152/06, precaution is of the general principles that guide national policies in the Italian area of environmental protection. "The correction as a priority at source" means that the actions called reinstatement in the specific form or otherwise limiting the most damage, are those that are to be preferred, however, when damage is occurring. "The 'polluter pays" the price of pollution is a major problem. In matters of environmental responsibilities, it is very important focusing on article 192 of the TFUE: Paragraph 2 provides instrument for an aggravated case of horizontal cooperation. It also underlines "the provisions of a fiscal nature," depending on the type of choice, of taxation that does not alter the convenience of comparative research. Fiscal policies are fundamental: it makes it convenient for environmental protection (by altering the convenience of comparative research).

Immediately after the tax rule, it considers "measures affecting town and country planning". The Community, through a process capable, as seen, to involve all actors (Commission, European Parliament), reserves the right to take measures that have impact on the land use or governance of the territories. This could be important for the Environmental Impact Assessment (EIA), because the plans are of the government of the territory (land use plans, landscape plans) thus refer to the prudence and the government of the territory. Also being subjected to this special procedure of the choices of energy strategy. A clear statement of the sensitivity of the

issues and geopolitical interests that lurk in the Community and national administrative ganglia. Financial support from the Cohesion Fund speeds up the policy that the Union can take to encourage countries that have regional imbalances. The multi-speed Europe is growing and the more increase the number of States joining the context of European law, the more these imbalances can occur from state to state. This may involve the adoption of mechanisms of temporary derogations to be able to put in order, our own country has benefited on several occasions. It represents an extraordinary measure that holds together in some way the different rates of development and therefore different levels of interest in environmental policies of individual European Union countries. Further examples of measures that reconcile the idea of a Green New Deal, even in the approach on energy policy, can be found in Directive 2003/87/EC of October 2003, with which, following the approval of the Protocol Kyoto by the European Community, was established a scheme for trading greenhouse gas emissions, and in Directive 2006/32/EC of April 2006, which concerns the end-use efficiency and energy electrical services and aims to promote energy conservation. It was revolutionary in this sense the package of proposals for directives presented by the European Commission January 23rd 2008 that aims to reduce CO<sub>2</sub> emissions by 20% (compared to 1990 levels) and responds to the commitments made by the European Council in March 2007. At that meeting an agreement was signed “20-20-20” to facilitate a global post-Kyoto Conference in Bali in December 2007. It was expected that in Bali were set objectives and strategies to reduce global emissions of carbon dioxide, involving U.S., China, India and other countries to date are not covered by the Kyoto Protocol. No concrete indications on the definition of path implementation of these principles. The climate-energy package accentuates the unilateral position of Europe, which will support economic and industrial efforts without counterpart in similar commitments of developed and emerging

economies, with a marginal result. Though this objective is very important in terms of reducing global CO2 emissions.

## 2.THE EMISSION TRADING SYSTEM

The European Union has been actively involved in protecting the global climate by promoting initiatives both internally and internationally, and has made the fight of climate change a priority of its program of action. In order to achieve the reduction targets set by the Kyoto Protocol, the European Union in 2000 launched a special "European Climate Change Programme" (ECCP), subsequently updated in 2005 (ECCP II). Run by the European Commission, the program has so far allowed the implementation of 40 strategies and measures at European level. Community measures, which supply the actions taken by each Member State at national level, including energy standards for buildings, as well as regulations aimed at restricting the use of some very industrial gases that contribute to global warming. The process involved several stakeholders linked to ECCP including the Commission itself, national experts, the business community and the community of international organizations. This broad participation is an essential element of the project because the votes with the widest range of contributions and consensus results of the implementation of these strategies and measures. Specifically, the first ECCP has examined a wide range of skill areas, with potential for reducing greenhouse gas emissions. Under the supervision of the Steering Committee of the ECCP, eleven working groups have addressed the analysis of each one of the following policies:

- Flexible mechanisms: emissions trading system;
- Flexible mechanisms: Joint Implementation (JI) and Clean Development Mechanism (CDM);
- Energy supply;
- Energy demand;
- End-use energy efficiency and industrial processes;

- Transport;
- Industry;
- Research;
- Agriculture;
- Irrigation of agricultural soils;
- Forestry policies.

Each working group has identified options and possibilities for reducing emissions on the basis of sustainability at the level of costs. It 'was also taken into account the impact on other policy areas of competence and its historical advantages, such as energy security and air quality. The launch of the ECCP II in October 2005 was characterized by the search for more affordable options for the reduction of greenhouse gases in synergy with the "Lisbon Strategy" aimed at economic growth and job creation. Have been introduce such as working groups on the geological storage, CO2 emissions from motor vehicles, emissions from aviation, and adaptation to the effects of climate change. A focus group was the key function of assessing and defining the implementation of policies and measures in the Member States with the ECCP study of its effects in terms of reducing emissions. In light of these indications, it can affect driving strategies identified any new decisions by the Commission and Member States to achieve the Kyoto targets by the European Union. Through the integration of the objective of greenhouse gas monitoring in all areas of Community action (transport, industry, agriculture, etc..), The European Union has managed to break the link between economic growth and emissions of gases responsible for the emissions: in fact, between 1990 and 2006 base year, in the midst of economic growth in the European Union, global

emissions of its 27 member states decreased by 10.8%. As for the 15 Member States who first joined the (EU- 15), this decrease was 2.7%. These figures are encouraging but we must do more to reach the EU target of an 8-15% by 2012. The latest projections indicate that the objective can be achieved provided that EU countries actually implement all the planned actions. To limit global warming to 2 ° C, the European Union considers necessary to stop the rise of global emissions of greenhouse gases within 10-15 years, and reduce them to half the 1990 levels by 2050. The goal is passed to a "climate-friendly economy," based on a combination of technologies and energy sources with low emissions of carbon dioxide. To underline its determination and set a good example for its partners, the European Union agreed to reduce their emissions of greenhouse gases by at least 20% by 2020, regardless of what other countries will . The European Union plans to achieve this reduction through the actions planned under the new integrated policy on energy and climate change, which will add to measures already in place. Among the most important measures promoted by the ECCP is part of the above: "Community system for trading greenhouse gas emission", Directive 2003/87/EC, Emission Trading System. According to the commitments enshrined in the ratification and entry into force of the Kyoto Protocol, the European Union has established, with this Directive, a system whose purpose is to promote the reduction of emissions through the introduction of flexible mechanisms and criteria of cost effectiveness and economic efficiency. The directive, despite explicit references in the preamble (paragraphs 10,17,19) and the Kyoto Protocol is, in fact, an implementation tool, nor is essentially independent. This can be deduced explicit the main differences between the international system (EIT), defined by the Kyoto Protocol and the European system (ETS) in terms of subjects involved, timing of implementation. The figures authorized to trade in the international system (EIT) are nation-states, ie those included in Annex B of the Protocol. In the

system envisaged by the directive, those who can participate are all persons (legal and physical) within the Community, and the people of Third World Countries who have signed a bilateral agreement (Article 25). As regards timing, the International Emissions Trading (IET), entered into force only from 2008, while the European Emission Trading Scheme has already entered into force January 1, 2005.

With reference to mandatory, although the two systems are mandatory for specific categories of subjects, the level of obligations foreseen by the European ETS is definitely more defined and structured as an international system of EIT. This can be deduced from existing and well regulated system of sanctions by the European directive against a "punishment" declared, but poorly structured in the Kyoto Protocol. The European system for the exchange of emission allowances established by Directive 2003/87/EC is characterized by the following elements:

1. The scope is extended to the activities and gases listed in Annex I to the Directive, in particular emissions of carbon dioxide from activities: combustion efficiency, production and processing of ferrous metals, mineral products processing, production of pulp for Paper, paper and paperboard;
2. Provision of a dual obligation for facilities regulated by it: the need to have a permit to operate the emission of greenhouse gases in the atmosphere that has a certain number of allowances and the obligation to make the end of the year number of allowances (permits) to the emission of greenhouse gases released during the year. The authorization to emit greenhouse gases shall be issued by the competent authority after verification by the operator of the same capacity over time to monitor their emissions of greenhouse gases;
3. The quota of emissions are released by the competent authorities of each plant operator regulated by the Directive on the basis of a National

Allocation Plan (NAP), each share shall be entitled to receive a ton of carbon dioxide equivalent;

4. The National Allocation Plan is prepared in accordance with criteria laid down in Annex III of the Directive, the latter include consistency with the national emission reduction targets, with projected growth of emissions, the abatement potential and the principles of protection competition, the NAP provides for the allocation of allowances for plant for predetermined periods of time;

5. Once released, the shares may be sold or purchased, such transactions may see the participation of both operators of facilities subject to the Directive, both of third parties (companies, local authorities, NGOs, individuals), the transfer of shares is registered in a national registry;

6. The yield of the share issue is carried out annually by the plant operators in number equal to the actual emissions of these facilities;

7. The actual emissions used in the yield of the shares of the operators are the result of monitoring carried out by the operator himself and certified by an accredited third party by the competent authorities;

8. Failure to surrender a share issue provides a fine of 40 euros in 2005-2007 and \$ 100 in subsequent periods, subject to the emissions penalty shall not be exempt from the obligation to surrender allowances.

The European system foresees the establishment of a series of verification mechanisms, through the use of independent auditors. With the implementation of Directive 2003/87/EC and with the approval of the National Allocation Plans for emission allowances, with effect from 1 January 2005, European companies belonging to Annex I of the Directive cannot continue to operate in absence of specific authorization. The first phase started from February 28 2005 to all facilities that fall within the scope of the directive were issued shares of emissions of CO<sub>2</sub> by the

competent authority of the Member State, to enable them to participate in the exchange on the market. Allowances to the emissions recorded in the previous year should be returned no later than April 30 2006. The system determines that the company that operates the plant, once in possession of allowances allocated with permission, estimates its actual emissions in the coming years. If emissions exceed the forecasts of the quantities of allowances and therefore not covered by the authorization to issue, the enterprise would take two strategies depending on the cost-effectiveness:

A. Intervene on its facilities, in order to remove the CO<sub>2</sub> emissions and reach the planned level of emissions equal to the amount assigned;

B. Emissions to earn credits through the flexible mechanisms "add" to the shares held, and then cover the total amount of emissions produced.

To facilitate the implementation of legislation, the plant operators have the opportunity to regroup. It allows them, in this way, to open a single account in the national register, with a single administrator for all transactions on the account, resulting in significant savings in operating costs and related operations on the account or by setting up small or medium that size alone cannot fulfill all the obligations or other facilities with large industrial groups that seek to centralize the management of quotas. Of course, there are also difficulties related to the fact that non-fulfillment of the obligations of the Directive by the operators of one member implies the blocking of transactions on the account for everyone, the administrator cannot, in fact, carry out transactions in the account if the Declaration on the emissions of one of the managers in a pool does not meet the requirements. To refine the Directive 2003/87/EC, in order to clarify the operation of the flexible mechanisms to give a real choice for businesses, EC intervened with Directive 2004/101/EC (Linking Directive cd), the latter links the market European emission reductions to the possibility of using other projects generated by the ECCP (JI and CDM). The PNA is then specified for each

sector and individual installation, the percentage share of emissions for which operators will be allowed to use CERs or ERUs, and each of these can be converted to EU allowances EEAS. The regulated flexible mechanisms, as already mentioned, the European Directives 2003/87/EC and 2004/101/EC, can be used by public and private entities who have not emission reduction obligations entitled to earn credits and put them on the market emissions. In this scenario, firms wishing to pursue projects of cooperation and internationalization, for which provision is made for greenhouse gas reductions, they can seize the opportunities offered by flexible mechanisms of the ECCP.

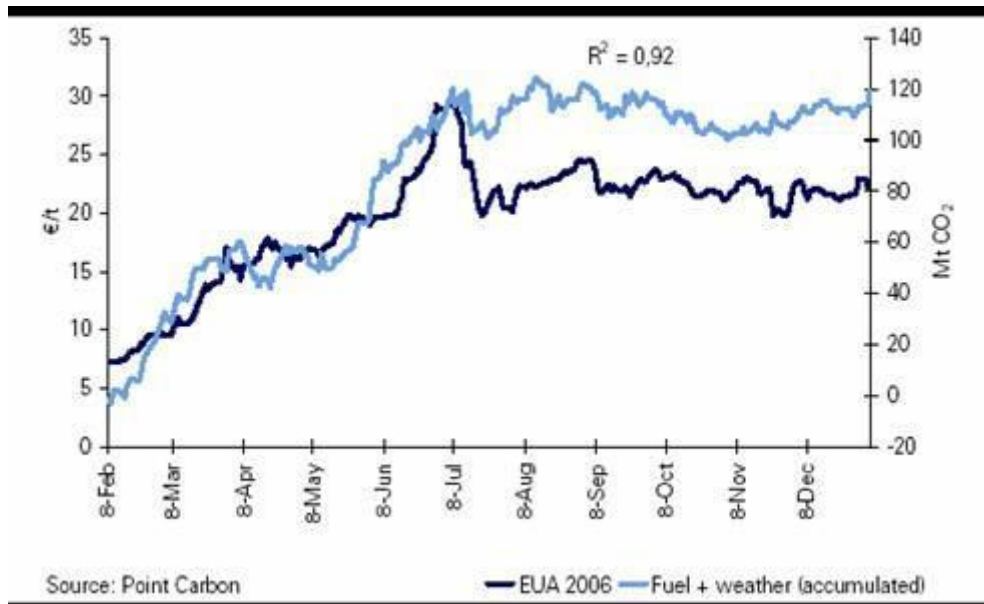
The EU directive states that, for each allocation period (2005- 2007, 2008-2012), each Member State draws up a national allocation plan (NAP), which determines the total quantity of allowances it intends to allocate for that period and how to this assignment. In the same directive contains the criteria that determine the content of plans. Decision making is entrusted to the competent authority and the main stages are: the definition of the total emissions to be allocated at the national level, allocation by sector and, finally, the allocation of allowances to individual installations must comply with the constraints imposed by Directive. From this decision comes the main content of the plans, which are also present different information about the methodology of allocation and distribution of quotas that has been followed. The European Commission has published guidelines to assist member states in preparing the NAP, despite its support, there were great difficulties in the preparation of plans, especially in the calculation of the amount and allocation of emission allowances to individual installations. For the first time, the PNA should have been published and notified to the Commission and other Member States by 31 March 2004. Italy, for example, has moved late on the implementation of the emissions trading system: the NAP has been presented more than a year later, and directives have been transposed into national law in June 2006; for these

reasons, Italy has been subjected to infringement proceedings. This uncertainty has also forced companies placed in a disadvantageous position compared to other European companies when it enters the market permits. For the second period, the deadline for submission of new PNA ended June 30 2006, only a few Member States have been timely in the presentation. The Italian Ministry of Environment has taken the new plan in consultation with the public in July 2009 and presented it to the European Commission in autumn, once the consultation process began. The preparation of the second PNA has proven even more challenging than the first phase. The negative experiences that occurred have proved that the success of the trading system depends very much on proper preparation of plans and an equitable allocation of quotas for enterprises. For this reason the Commission in drafting the guidelines said it considers the first period as a "learning exercise" and has established some criteria for addressing the second period. First of all required the preparation of plans clear and transparent. *In secundis* the allocation is more restrictive and the use of incentives to trade in order to achieve the Kyoto targets in a cost effective, bearing in mind full use of instruments such as CERs and ERUs, provided by the linking directive, can easily be used. The experience of the first year of operation of the market in CO<sub>2</sub> led to the creation of a global carbon market, which uses the traditional tools of financial markets. The further development of spot markets and other risk management tools have allowed the market to develop and be placed alongside other mature markets already. The presence of intermediaries is useful to the development of the market, they allow to overcome the obstacles posed by the presence of numerous participants from different countries where different laws apply tax and financial. For the trading activity within the EU-ETS, you can contact, in fact, to different subjects, as well as the stock exchanges of emissions, you can resort to a trader or broker, or to treat the sale of shares directly with another plant. Several operators provide

flexibility in trading operations or provide consultancy for projects to reduce emissions. This allows companies to consider carbon dioxide an integral part of management and the price of permits an opportunity cost which directly influences the production costs of companies subject to the Directive and indirectly those of other companies, for example through the price of 'electricity'. Those who have recourse to a trader can make transactions and large volumes and modest size, with personalized treatment and no commissions. Traders generally running any type of operation, as they have available is just a volume of permission (purchased or obtained through the CDM) is an exchange with the stock exchanges and other players in the system. Some trading companies offer their customers direct access to exchanges, so that even the smaller parties will be able to operate without the burden of opening an account at the stock exchange. Brokers, on the contrary have their permits available, but act as intermediaries between a company that wants to sell and who wants to buy, negotiating the price and contract terms on behalf of each party. The broker has, among its core competencies, a good knowledge of the market and a large number of contacts and can try to meet the needs of customers. The disadvantages, by contrast, are the commissions charged on each transaction and the difficulties typical of every brokerage operation is often subject to the contract to be entered into with each third party contacted by the broker. Permits the direct exchange with another company in the emissions trading system, however, has the advantage of having no commissions and can be arranged in a direct way, but we need a much more careful in order to set a fair price for both sides. If you decide to do the stock market, the liquidity of these advantages are "trading platforms", since there are many people willing to trade quickly. It should be born in mind that participation in the stock market involves opening an account and then the possession of specific requirements, paying a registration fee and a commission for each transaction. In addition, permits

are generally traded in minimum lots (usually 5,000 Mt CO<sub>2</sub>), with the result that fewer people may find it difficult to sell or buy more modest volumes. The market share is composed of two prices, the lowest level to which the seller is willing to sell and the highest price at which the buyer is willing to buy. The purchase price is called "bid" to sale "offer of sale", the difference between the two prices is called the "spread." Delivery times attract different spreads and different prices: those who want to buy or sell with delivery in 2010 will find a very wide spread, buyers or sellers with delivery in 2006 will encounter a rather narrower spreads. Even spreads attract several different volumes: the volumes will be very small or very large spreads wider, the standard will have the tightest spreads. This is given by the lower liquidity of the market and the lower number of buyers and sellers compared to non-standard volumes. The price of CO<sub>2</sub> depends on several factors: the European Union policy and that of nation states with which they were established emission limits, market fundamentals, the difference between emissions that occur in the plants concerned and the amount of permits allocated for free (Cap), the psychology of traders; the choices of businesses and credits from investments in CDM or JI projects. Among the market fundamentals can be considered: weather patterns, fuel prices, economic growth and dissemination of new technologies. One of the key factors in price formation is the amount of CO<sub>2</sub> emissions, which is linked to at least three other factors: the mix of fuels, the production level and the ability to reduce emissions. The first factor is the mix of fuels used to produce energy, which is the basis of emissions, preferring fossil fuels, like coal, leads to a higher level of emissions compared to the use of hydropower and nuclear power. The mix depends on the price of fuels, mainly from the relationship between the price of gas and coal prices, which lately are in strong competition. In the future it is expected that fuel prices are influenced by those of CO<sub>2</sub>, if the price of permits increases should be preferred to cleaner fuels. Cannot be excluded that in the

presence of very high prices of the shares in the long term effects of a fall in the price of renewable energy at the rate of growth of demand, expanding the scale of production, in a first stage generate increasing returns and economies of learning. The level of production, however, is linked to that demand, which in turn depends not only on the electricity prices, economic growth and weather conditions. Economic growth means increased demand for goods and services, increasing the level of production and, consequently, the level of emissions. On the other hand the wind, rainfall and temperatures have a strong impact on emissions in the electricity sector. The figure below shows the trend in the prices of permits allocation compared with the trend in fuel prices linked to changes in temperature and rainfall during February /November 2005. It is known as the market was affected by the fundamentals, the distance is 0.92 points overall during the year and this is another sign of how the market works and that the price is not fixed arbitrarily. The winter and summer, for example, determine the energy demand for heating or air conditioning, while the wind and precipitation affect the availability of wind energy and hydropower. As for the possibility of reducing emissions, there are several technological solutions, the shift to low carbon sources (from coal to gas or, in the long run, renewables) to the seizure and storage of CO<sub>2</sub>. The convenience or not to adopt these options depends on the comparison between the marginal cost of abatement and the market price of CO<sub>2</sub>.

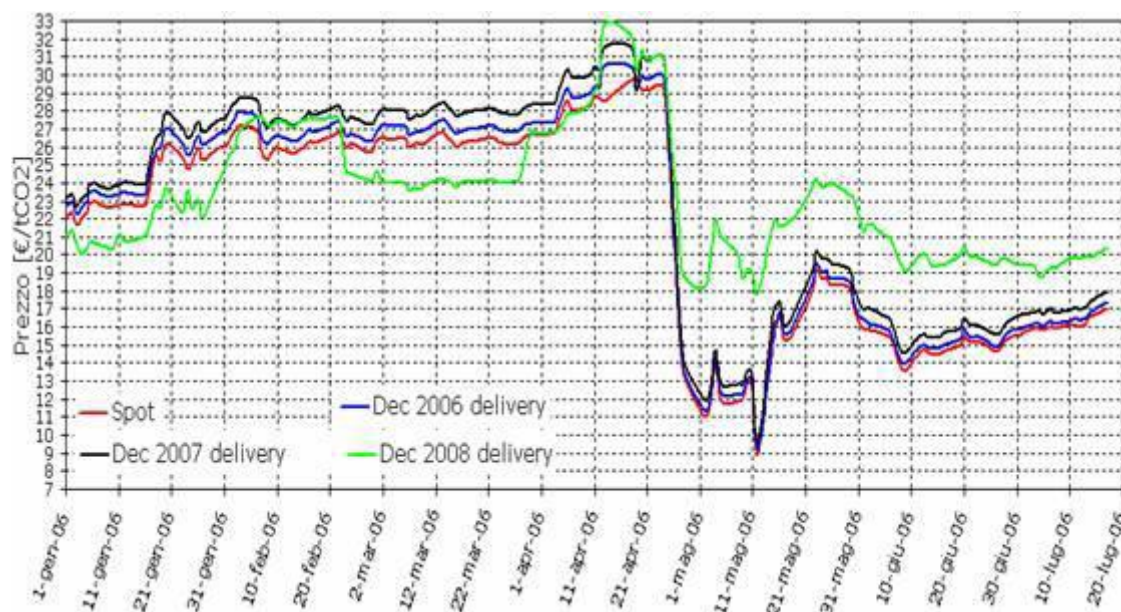


The structure of the trading platforms is directly connected to the process of price formation of carbon dioxide. To understand how they work it is useful to analyze: the evolution of prices, their volatility, trading volume, trading platforms and the characteristics of market participants. The data reported in the next figure show the general price trends and developments as regards the first trading period. The first emissions trading took place in 2003, at that time the price has risen from 6 to 12 euros, remaining at that level until May 2004 when it dropped to around € 7. The price remained stable until early 2005, when there was a growth that has recorded the maximum value in May of 2005, reaching € 30 fee. The price increase can be attributed to several factors: the political decisions taken on the NAPs, the uncertainty of the environmental policy of different States, the rise in fuel prices, cold weather in winter and the absence of suppliers market. At the end of July 2005, prices have dropped again following the drop in the price of gas and the entrance of the Czech Republic in the market. In early 2006, prices rose to € 25 as a result of rising gas prices determined by winter drive, were stable for several months then up to € 30 share in April led growing FROM COURSE fuel prices. Following the publication of the

first emissions data 2005, prices fell to a level equal to half the value it had previously reached. Some countries, including Holland, France and Spain, have stated that their level of emissions was less than the number of permits allocated in their NAPs. Many countries, as reported previously, have, in fact, demonstrated a high surplus of allowances. The price trend is determined, however, from a set of causes that should not be attributed solely to events related to the early publication of data on emissions. After the fall of prices in the month of April, in fact, the price of permits has started to grow again because some members of the market continued to operate normally trying to protect themselves from the instability of energy prices but also because several companies have begun to sell their surplus allowances.

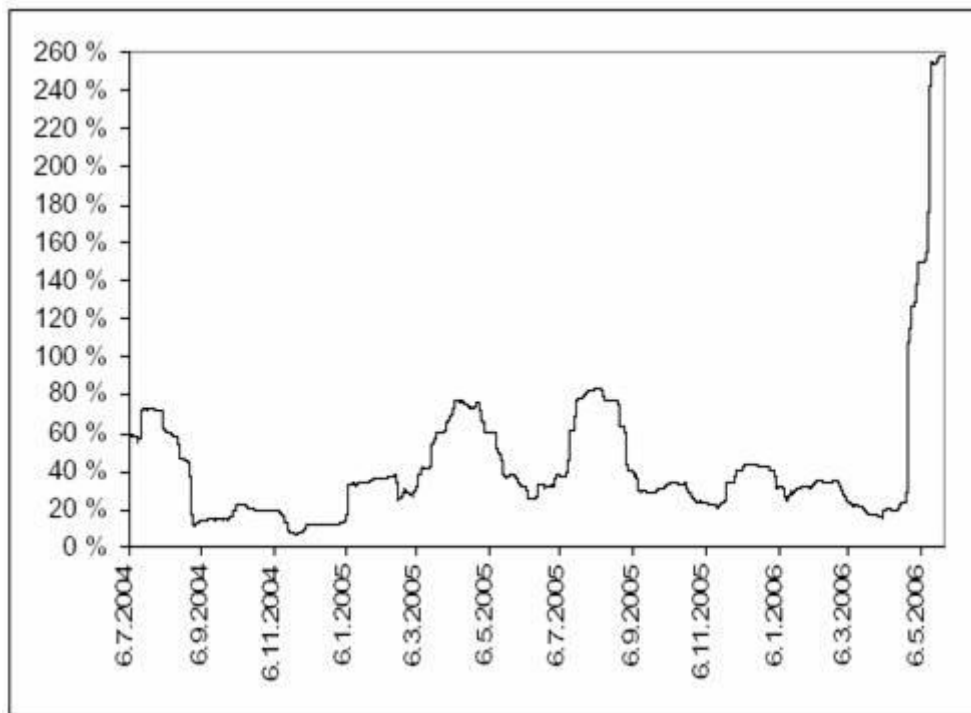


Reuters 2006.



Source: Point Carbon

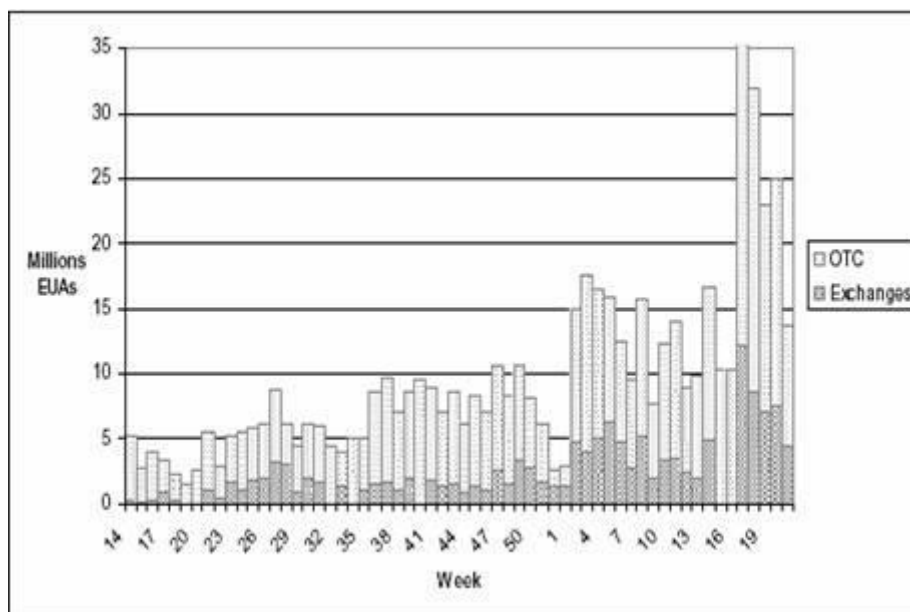
Price volatility measures the fluctuation of prices in a given period. During in further analysis and in-depth study of the period, it is useful to consider all variants of the newborn market economy in order to define the efficacy and the implementation in daily practice the principles expressed in the Directive. In particular, it was found that the price volatility of the market for EUAs has been very high both for the development of fundamental and technical reasons linked to the regulatory aspect. The trend in volatility, calculated daily based on the prices of the previous 30 days, is shown in the figure below, where we see that 2004 was a period of stable, while in 2005 was stronger in summer than in winter , reaching levels higher than 205% in the spring of 2006.



Source: Point Carbon.

Even before the official start of the EU-ETS system, some companies were prepared to trade in shares through forward contracts, so in 2003 TCO<sub>2</sub> 650,000 were exchanged, the exchanges have intensified to reach 262 Mt CO<sub>2</sub> in 2005, with a value amounted to 5.4 billion euros, while in the first six months of 2006 were 203 Mt CO<sub>2</sub> traded with a value of 6.6 billion euros. Most of the exchanges, about 60%, are made through brokers, the role of the trading platforms is growing while the rest of the exchanges take place through bilateral agreements between the companies. The figure below depicts the weekly volume of trade and market over-the-Counter (OTC) from 14th to 16th week of 2005 in 2006. The volume has increased steadily since the spring of 2005, reaching the maximum level in the spring of 2006, a period that coincides with the maximum value of price volatility. Between 2005 and 2006 there was a decline is due to the fact that the permits were exchanged as shown in the records, is that the permits could

be transferred from year to year. The exchanges of many companies have been limited by high price volatility, market uncertainty and immaturity. The growth in volumes, in fact, coincided with the development of the market and has brought greater liquidity factor that attracts many traders and facilitates transactions.



Source: Point Carbon.

Spot markets have made trading volumes lower than expected due to delays with which they are presented the PNA and the technical difficulties in the operation of the registry. The high number of exchanges in the forward market has led to use the price of that market as a guide investment decisions and as an information tool for the public and to decision makers on the true cost of emissions trading. The main European trading platforms are:

- European Climate Exchange (ECE), based in Germany;

-European Energy Exchange (EEX), based in England;

-Nord Pool, based in the Scandinavian countries;

-Powernext, based in France;

-Energy Exchange Austria (EXAA);

-Burza Komodnita Bratislava (KBB);

-Climex Alliance, born from the union of local players including: New Values, SendeCO2, Amsterdam Power Exchange (APX), the APX PowerUK, euets.com and STX Energy Services.

Before the start of the ETS limited to trade through forward contracts. The Nord Pool was the first to go with the offer of standardized futures contracts and is the second largest market with 5% of total trade, the most liquid market is the place where ECX90% of total trade. The first market to offer contracts was the EEX Spot, the futures market is currently about 95% of trade spots while the 5%. Considering that 60% of the forward market is in the hands of brokers, we can deduce that only the Nord Pool and ECX offer futures contracts, while others offer all spot contract.

Stock Market	Start	Products
Nord Pool	11.02.2005	Futures, Dec. 05-07
EEX	09.03.2005	Spot
ECX	22.04.2005	Futures, Mar/Jun/Sept/Dec 05-07 Mar/Dec 2008 Dec 2009-2012
Climex Alliance	22.06.2005	Spot
Powernext	24.06.2005	Spot
EXAA	28.06.2005	Spot
KBB	27.12.2005	Spot

Source: Stock markets

Market participants are large companies, brokers, banks and investment funds. The most active companies operating in the energy sector, either because they have large numbers of permits to be exchanged, either because they are already experienced in trading. Market participation has been limited by the non-operation of national registries, the presence of many actors increases the liquidity, the presence of different platforms from this point of view favors the development of the market but another is not a good thing because creates decentralized markets. The final focus is on 'Emissions Trading System shows how in recent years there have been

major advances in European Union policies to reduce greenhouse gas emissions. The importance of creating a market share because it allows to establish a predetermined level of emissions and offers business actors a flexible tool to achieve their goals: they can choose, in fact, whether to reduce their emissions or buy permits from other companies. The advantage of the creation of markets compared to other instruments is that of relative return guarantee, emissions are reduced only if the operation proves to be economically valuable. In the first period of operation, the market for permits has been developed: the increased trading volumes, market participants and the knowledge of the ETS have directly affected the decision-making processes of the companies involved and indirectly those of companies that use the products. The presence of exchange platforms in many European countries demonstrates the interest of the operators for the financial sector, thus allowing a spread trade. You should try to prevent them from creating too many decentralized markets that circumscribe the operations in limited regions, because, with the operational phase of the Kyoto Protocol, it strives to achieve a global market involving all countries concerned, thus abandoning the logic of the individual plant. The system demonstrated to be efficient to work taking into account that the directive, which created the "cap and trade", has been designed and developed in a short time. The scheme envisaged for Member States to submit to the Commission's assessment of the NAPs according to precise deadlines and under time pressure, wanted to allow the departure of the markets in January 2005. Before the official start of forward exchange markets, albeit with limited volumes. The realization, at a later time of national registries has facilitated the development of spot markets, which registered a steady growth in cash.

To ensure greater credibility to the system there should be the taking of actions on many fronts of the system. First, the Commission should require more consistent sanctions with the directive of the PNA, to prevent, in

Phase II, which coincides with the operational phase of the Kyoto Protocol, a fall in prices as occurred between 2005 and 2006. There was no coordination in the sharing of information concerning the surrender of shares and this should be improved because an efficient market does not need the information of items. The PNA has shown, in the first stage, the strategic importance in the success of the market. Over-generous allocations may damage the market and prevent the realization of the objectives of the Directive. Then we should worry about expanding the system to include other sectors and other gases, in order to reduce the gap between the overall objectives of reducing greenhouse gases and those of the EU-ETS. This would require a substantial effort of companies to comply with its obligations: the use of Kyoto mechanisms would ensure that the objective of the reduction has a purely financial feature, ie the purchase of shares from countries where the allocations were more "generous" or had less stringent limitations to the use of quotas. It would lead, in any case, to reduce emissions in third countries, despite the availability of surplus allowances that should depend on the different marginal abatement costs.

Phase II (January 2008 - December 2012) currently in force would suffer the negative effects of the economic crisis of 2009 with its ambitions on the downsizing of the community project. However, the proposal submitted in January 2008 by the Commission (in co-decision and approved in December 2008) saw the adoption of a directive marks and a series of changes to the ETS such as that of creating incentives for further market development. The scheme envisages an allocation of quotas in Central Europe by eliminating allocations plans. It 'also provided an assignment fee, by auctioning for allowances allocated to power generation sector. In this way the value of the share issue will no longer be an extra income for producers but a willingness economic power in the hands of governments. The expansion of the system will allow, finally, to harmonize the rules of

allocation for Phase III, addressed from January 2013, with related benefits to the prospect on future emissions.

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