1999-2002: The European nuclear energy policy sector at the crossroads

> *"All policies must have sustainable development as their core concern."*
>
> Communication from the Commission *A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development*

1.1.Introduction

The post-Chernobyl period was marked by the growing realization of what Beck refers to as a "cosmopolitan reality" (Beck and Sznaider 2006). The catastrophe triggered a growing awakening in Europe to the conditions of interdependence in environmental issues. Boomberg (1998), for instance, describes this period as being unusually favourable for the rapid development of environmental policies within the EU member states and was generally marked by the highest ever level of public support of the European environmental policy. It is amidst these developments that the European Union sought to solidify its commitment to sustainable development. But what future was there for the European nuclear energy policy?

As a result of the growing awareness of the dubious from the environmental point nature of electronuclear technology, nuclear industry sector suffered a tremendous loss of public and political support. Yet, the Euratom Treaty, a primary law guiding policy-making within the area, continued to exist unchanged, reflecting the enthusiasm of the 1950s. The reform of the Treaty did not appear even as a distant prospect: holding diametrically different positions on the subject of nuclear power Member States chose inaction fearing of not being able to find a common position. In similar vein, an adoption of the EU-wide moratorium on the use of electronuclear technology was not even an option, being an exclusive competence of the Member States. Was there any exit from the deadlock that the Treaty put nuclear energy policy into? Would nuclear energy policy ever be able to reflect new concerns and seek the fulfilment of new objectives?

The current chapter sets out to investigate visions that the Commission projected on the European nuclear energy policy during the period between 1999 and 2002, analysing these developments in the light of the Union's commitment to a new approach for dealing with environmental problems – sustainable development. The theme of sustainable development has been characterizing the way in which the EU managed ecological issues ever since the adoption of the Brundtland report "Our Common Future" (1987), challenging the conventional "command and control" model which dominated the environmental policy-making process. The central idea underpinning sustainable development approach – that environment could be protected without burdening the economy – fell particularly into the good ground after the Commission became serious about the implementation deficit in the EU, shifting its focus from the adoption of environmental legislation to making sure it was actually implemented in the member states. It is then when the realisation of the actual costs of the European environmental policy became evident leading to ill-feelings

among certain member states and even calls to roll back the Commission's involvement within this sector (reference) became common. In this context, environmental measures underpinned by cost-effectiveness were received more favourably by member states. Cost-effectiveness became the central element of the ideal environmental action under the banner of sustainable development where the pursuit of environmental goals was to be exersised synergetically with sectoral and development goals.

In addition to cost effectiveness, DG Environment, the original advocate of the sustainable development approach, advanced the integration of environmental objectives into all other sectoral policies; mainstreaming environmental protection was deemed necessary to ensure cost-effectiveness of the new environmental management approach. By obliging all European policy-making actors to incorporate concerns for the environment into the exercise of their policies, ecological damages were said to be anticipated and, hopefully, prevented from taking place in the first place, cancelling any need for the costly end-of-the-pipe measures. In other words, the new approach envisioned to move engagement with environmental management outside the narrow scope of environmental protection. The importance that was prescribed to environmental policy integration is reflected in the fact that it entered into the Treaty as Article 6. This article was a predecessor of the explicit commitment of the Union to sustainable development when this goal was offically proclaimed as one of the fundamental goals of the European integration, mentioning it both in the preamble and Article 2 of the Treaty of Amsterdam. In other words, by 1999 sustainable development was raised into a legal obligation. While this development alone constituted an important policy change, the political landscape in which the European Commission was about to act was marked by a number of new challenges.

To begin with, the issue of climate change left the realms of science fiction and climbed high onto the agenda of policy-makers (Barnes 2008). The European Union engaged itself with negotiations surrounding the Kyoto Protocol seeking at the same time to reach an agreement among member states on the EU-wide targets to abate climate change.

Further, the surge of the oil price in the beginning of the 2000s signified an end of the decade during which the countries of the European Union enjoyed a stable and relatively cheap supply of energy.

Finally, the EU was preparing for the largest in its history enlargement. Scheduled for 2004, the Union was about to extend its borders to ten new member states from Eastern and Central Europe, many of which relied on the use of nuclear energy for their energy needs, as a result of the legacy of the Soviet Union's influence for the last part of a century. The dependence of these countries on electronuclear technology had long been a source of concern for the EU, culminating with the Commission's supervision of the situation concerning nuclear waste and management of safety (Saurugger 2004).

Did the new challenges bring about any immediate changes into how the European Commission conceptualised issues that would steer the Union's involvement with the nuclear energy policy?

Did it change what was defined as a problem within the nuclear energy sector? And what particular solutions were being advanced?

The official position of the Commission in relation to the electronuclear sector in the immediate after-Chernobyl period was described as “agnostic” (Lyons 1992). The use of nuclear power became a matter of real controversy, the majority of the Commissioners in the College were not in favour of this energy source and the Commission’s official documents barely touched on the subject (Ibid.).

The turn of the century, however, witnessed a break away from the earlier Commission’s politics of neutrality in relation to the role of nuclear energy. It is possible to speculate that the escalation of the interstate conflicts in this policy sector, the rise of the issue of climate change, the institutionalization of the sustainable development objective, the intensification of the energy security concerns which accompanied the rise of oil prices in 2000 and the ageing energy infrastructures of the Member States – all contributed to this phenomenon. But no factor was arguably more important than the election of a new College of Commissioners which began to perform its duties from the second half of 1999, following the sacking of the Santer’s Commission.

In particular, two newly elected Commissioners responsible for energy and environment protection policies (Loyola de Palacio and Margot Wallström) appeared to be both particularly engaged with the subject of nuclear technology. However, they advanced contrastingly different roles for it in the Union’s process of transformation into a sustainable Union.

To assist my analysis, the chapter is organised in the following way.

From being a taboo issue in the immediate after Chernobyl period, the subject of electronuclear technology resurfaced on the Commission's political arena. Promotion of electronuclear technology has from the early days been at the heart of the Commission's involvement, stemming from the obligation found in the Euratom Treaty. Arguably, the post-Chernobyl ideational context marked by the growing public and political mistrust opened an opportunity for the evolution of alternative conceptualisations of the nuclear energy policy. Section 1.2. elaborates on the spread of new ideas which at the dawn of the century sought to provide the European nuclear energy policy with the new direction. Inter-state conflicts concerning nuclear safety and the Union's further institutionalisation of the commitment to sustainable development appeared to supply a justification for the reassessment of the Union's engagement with the subject matter of electronuclear technology. The arrival of the new Commissioner for the DG Environment upholding these general ideas was an important precondition for the mobilization of this new frame. Identifying key stakeholders and drawing examples from official policy documents, section 1.3. elaborates on the gradual influence of the new policy frame on the Commission's official policy line in the nuclear energy sector. Attempts to re-conceptualise the traditional understanding of the nuclear energy policy, however, did not remain unchallenged. Section 1.4 analyses the emergence of the rival policy frame which sought the invigoration of the traditional ideas which have surrounded the European nuclear energy policy since its inception by stressing the importance of

support, preservation and, ultimately, invigoration of the stagnating at the time European nuclear energy sector. As a result of these different conceptualisations, the Commission, an institution which is supposed to guard a common European interest with a single voice, was projecting a far from a unified vision regarding the future direction of the Union's electronuclear policy. Section 1.5. will attempt to understand which of the advanced by Commission's perspectives found their way into the Commission's official documents. A concluding discussion is offered at the end of the chapter. Framing efforts did not only lead to the gradual erosion of nuclear legacy frame which better reflected the economic and social context of that time, as the developments within the sector witness. Advocates of the traditional policy frame contributed to the gradual reframing of the understanding of how sustainable development should be translated within the general energy sector.

1.2. "The beginning of the end of nuclear power in the EU": ideas about a new direction within the European nuclear energy policy

The growing realization of the borderless character of electronuclear technology which have characterised the post-Chernobyl period have led to a number of developments at the international and the European levels. While efforts at the international level were directed at the review of the important of the legal instruments concerning nuclear safety, the EU was involved with practical issues of nuclear risks on the ground.

More specifically, following the decision of the Member States at the London and Munich G7 Summits in 1991 and 1992, the EU embarked on a very intensive process of assisting candidate countries of Eastern and Central Europe to improve their safety situation at nuclear installations. (SORGEM 2000). Ironically, despite the lack of common standards for nuclear reactor safety within the EU, the Commission and the Council had nonetheless taken up the position that achieving a level of nuclear safety comparable to that in the EU was a strict condition for applicant countries to join the Union. Throughout the 1990s the European Commission was playing a very prominent role in pursuing these objectives by assessing the safety situation and modernizing the power plants.

It was the regulatory focus of nuclear safety situation in the accessing countries that have characterised the Commission's post-Chernobyl period. The turn of the century saw the escalation of numerous conflicts concerning the crossborder side-effects of electro-nuclear technology. At the same time the supranational level – which was most suitable for addressing these problems – could not yet offer any solution. Unlike in the accessing countries, the Commission's post-Chernobyl involvement in the sector was moderate: it focused on developing uniform safety standards in relation to such matters as exchange of information, contamination of foodstuffs and feedstufs, shipment of radioactive waste and substances. In other words, all issues which concerned health, and not the actual standards at nuclear power plants.

Transnational conflicts concerning nuclear risks exposed deficiencies in the common nuclear energy policy. Representatives of the member states and environmental NGOs supported greater

involvement of the European Commission with the regulation of the risks of nuclear technology. For instance, Ireland, itself a country which did not rely on nuclear power, had been vocal about the negative environmental effects on its territory as a result of numerous radiation leaks from the nuclear power plants based in the UK (in particular the recycling plant in Sellafield). It has long been an avid supporter of the European Union free of nuclear power and even have advocated an inclusion of a ban on the use of nuclear energy into the concept of sustainable development. Austria, another starkly anti-nuclear member state, had being seriously concerned by the fact of having nuclear power plants at the close proximity to its borders, numerously engaging in conflictual dialogues with its neighbours. (ref ref ref!)

The Union's deeper engagement with sustainable development provided environmental NGOs with new powerful arguments for the re-evaluation of the Commission's policy line in relation to this energy source. They advanced an idea that the biased in relation to nuclear energy Treaty needed to be rendered obsolete, leaving Community institutions with the soul task of regulating the risks of nuclear technology:

"Radical reform of the treaty must be the top priority. The Commission should focus on developing a common framework for a sustainable EU energy strategy." (Rocholl via Carstens 2002)

The question now is, was the EU capable of adressing an entirely new type of tasks underpinned by ideas to promote sustainable development and concerns for nuclear safety under the unrefomed Treaty? Could there be any other trajectory for the European nuclear energy policy when the reform and especially the abolishment of the Euratom Treaty deemed impossible?

A new set of ideas was born out of this special situation in which electro-nuclear technology was finding itself at the turn of the century. Central to these ideas was the rejection of electro-nuclear technology, yet this rejection was not based on the adoption of the EU-wide morratorium. The state in which nuclear industry found itself at the time did not necessarily require such straightforward (and yet unfeasible for the time being) measures.

To be more specific, if public and political disenchantment with nuclear technology have generally characterised the post-Chernobyl period, a rapid stagnation of the European nuclear industry became by the late 1990s a fact that was difficult to contest. Commenting in its newsletter on the developments in the EU within the nuclear industry sector, World Information Service on Energy (WISE), an international social movement group engaged with the mission to "create a reliable, affordable and sustainable energy-future without nuclear power" (WISE 2014), heralded the "beginning of the end of nuclear power" in the Europe Union:

At the moment, eight from the 15 countries of the European Union (EU) do not use nuclear energy for electricity production. Two other countries, Sweden and Germany, are planning to close their nuclear power plants. No EU country seriously considers to build a new nuclear reactor. This situation more or less signifies the beginning of the end of nuclear power in the EU. (WiSE 1999)

Indeed, by 1999 the European nuclear industry was confronted with an unprecedented situation: no orders on new nuclear plants were made and none were being either planned or built. Further,

out of fifteen member states only three continued to remain favourable to nuclear energy production (European Commission 2000) signifying that the consensus at the time of the creation of the Euratom Community did not exist any longer. Energy analysts estimated that nuclear industry, after years of stagnation, reached the stage of "terminal decline" (Froggatt 1999) due to the prevailing political and economic climate. Thus, nuclear industry did not only experience severe decline of political and public support. Being historically reliant on unchallenged state protection and nurturing for its development, it lost its attractiveness for investors on the increasingly liberalised energy market marked by quick returns and prohibition of state subsidies. Even international banks, such as the World Bank, adopted a policy of refusing provision of finances to all nuclear projects motivating that they were not economic and involving huge (and normally underestimated) capital costs characterised by lengthy project delays (Froggatt 2002).

That policy actors advancing a vision of the future energy system without nuclear power used a pro-economic argument further illustrates the weakness of the position of the European electronuclear technology at the beginning of the new century. Rather than placing emphasis on the electronuclear technology's negative environmental externalities, environmental NGOs made a bold choice to expose the nuclear energy's general uncompetitiveness and incompatibility of electro-nuclear technology with an utmost objective of the EU – economic development:

> We don't neglect the role nuclear power is playing in the European Union, we don't neglect the importance of the future of the people making a living by working in and with this industry. We don't even ask for a political or ideological rejection of nuclear power. The only thing we want is a true and fair level playing field for all energy sources. If a utility wants to build a nuclear power station let it raise the money by itself, if a nuclear station is considered to be too dangerous let the utility pay for repair and upgrades. If it is uneconomical to do so it should be closed. Discussion on the safety level of several Eastern European reactors are being disturbed and flawed by the fact that at the end of the day there is always European taxpayers money to extend the lifetime. Let's face it: Euratom money is not being used to fix safety problems which have to be dealt with very quickly after which the reactor is being closed soon. (De Rijk 2002: 28)

Thus, due to the extremely weak position of nuclear power industry, the supporters of the vision of the future energy system without nuclear power focused on demanding the abandonment of the systematic promotion of this energy source by the European institutions. They saw the possibility of fulfilling that goal within the EU context even without the EU-wide ban, something that could have never become a posibility anyway. In the context of the stagnating nuclear energy sector, the withdrawal of political support of EU institutions was estimated to have ultimately brought about the end to the nuclear industry.

Simultaneusly the end of the 1990s and begining of 2000s were marked by a number of pressures for the creation of the EU-common regulation. To begin with, criticism was mounting for the lack of clear standards which would have allowed to evaluate the Commission's progress in the area; what were the yardsticks against which the progress could be measured? Or was it an indirect subsidy in breach of the European competition rules and involvement of the EU Commission by providing material and technical support for the modernization of nuclear power plants in future candidate countries (Froggatt 2002: 41)?

Thus, the period directly after the Chernobyl catastrophe served as a beneficial environment for

the development of a new set of ideas. Underpinned by the focus on the nuclear energy externalities and rejection of the continued promotion of the controversial energy source have been developing and floating in the "primeval soup" (Kingdon 1984) of the EU policy agenda for some time. But it was not before the beginning of the term of the new College of Commissioners that these ideas found their reflection in the framing efforts concerning the European electro-nuclear policy.

1.3. The birth of a new policy frame

The arrival of the new Commissioner for Environment Margot Wallström marked the mobilisation of the post-Chernobyl ideas in general; 1999 saw the launch of the new policy frame centrally underpinned by the concerns for the effects of the nuclear technology on the environment. Because it was focused on the nuclear energy's side-effects, I will from then and on refer to it as nuclear legacy frame. The document adopted in 1999 witnesses that this policy frame was already making influence on the Commission's conceptualisation of the direction of electronuclear energy.

Even prior to taking her post in the College, Margot Wallström had very clear ideas about the role that was needed to be afforded to nuclear technology in the coming years. While describing herself as "progressive", during the extensive interviews with her by various committees of the European Parliament, she declared that she believed in a "sensible phase out" (Wallström 1999: interview) of this energy source. Stressing the nuclear energy's environmental externalities in the form of nuclear safety and waste management, the Environment Commissioner advanced a policy line in accordance with which the Commission should not attempt to seek the renewed favour towards the use of this technology:

> Everyone has his or her views on nuclear energy. It is a fact that most member states do not see nuclear as a long-term energy option at this stage. There are concerns about safety and that we have not yet solved the problem of storage of nuclear waste. (Wallström 2000: speech)

Headed by Wallström, DG Environment projected a vision in which electronuclear technology was not prescribed any substantial role to play in the future transformation of the Europe's energy system. Thus, even though the Treaty officially continued to foresee the Commission with the role of the guardian of the electronuclear industry in the Union, the policy frame advanced by DG Environment sought to nevertheless do away with this traditional role.

Placing the risks of electronuclear technology at the heart of the policy frame, the approach advanced a line in accordance with which nuclear technology was not and could not be sustainable due to a very special character of its risks. And even though this position foresaw the Commission's involvement with the regulation of the risks, this involvement was meant to take a form of an environmental protection measure in order to minimise the legacy of nuclear technology and not an approach that could in the long run turn nuclear power into a more sustainable form of energy Nuclear was not sustainable by definition, it was not a matter of degree. Nor were the alleged climate benefits of nuclear energy in the form of lower greenhouse emissions something that

could change the position of the DG Environment on the subject of the role of nuclear power in the transformation into a sustainable European energy system:

Nuclear is not a sustainable source. Besides, our calculations show that we can meet our Kyoto goals without changing the balance between different energy sources (Wallström, speech via Harding 1999).

The ideas of the new legacy frame found their reflection into the document prepared by DG ENV in 1999. One of the first official documents that dates from the beginning of the new College of Commissioners - *Europe's environment: What directions for the future* (COM 99/0543 final) sought to sketch out future steps that the Commission was planning to take in the coming years to protect environment in the light of its commitment to sustainable developments. In this document the Commission seeks to bring attention to the risks of electronuclear technology *within* the territory of the European Union. Referring to a number of new challenges facing electronuclear policy, the document simultaneously highlights the Union's lack of powers in a policy area of growing importance:

The Community has no competence in the safety of nuclear installations but supports co-operation between Member States. Ageing nuclear installations, the economic effects of liberalisation of the electricity industry and a steadily increasing number of decommissioning projects require intensifying this co-operation. The unresolved issue of long-term storage or disposal of high-level radioactive waste will require continued special attention.

This passage acknowledges that essentially all nuclear power plants, whether situated in the candidate countries where the Commission had already been exercising its regulatory powers since the beginning of the 1990s or in the existing member states where similar involvement was not possible, presented environmental risks.

Further, the document does not contain any references to nuclear energy in connection to the problem of climate change, despite the growing attention to the alleged advantages of this energy from the perspective of greenhouse mitigation. The position on the solution to the problem of climate change is expressed in the documents unequivocally: only the reliance on renewable energy sources as well as the adoption of effective energy conservation measures should be used in the Union's attempts to address the problem of climate change.

The context in which electronuclear technology was becoming increasingly obsolete provided a policy opportunity for the Commission to launch a frame which was to be guided by the prerogative to take care of the legacy of the electronuclear technology, thereby abandoning its traditional focus on promotion. So while the focus on the legacy of electronuclear technology was advanced as an important approach by the Commission in the meanwhile, the long term solution envisioned the gradual disappearance of nuclear power plants from the European energy landscape. As for regulatory measures, only the adoption of strict standards was envisioned by the European Commission.

DG Environment which possessed a portfolio in nuclear safety matters, expressed little enthusiasm on the issue of the need to speed up the development of the common nuclear safety standards at

the supranational level. This position was not motivated by the belief that member states were better placed to control the transboundary risks of nuclear technology. Rather, the Commissioner considered that the window of opportunity has not yet come to adopt a piece of legislation with standards that will make a real and tangible effect on the situation of nuclear safety:

I recognise that, while there are Community standards for the protection of the health of workers and the general public against the dangers of ionizing radiation, for other areas of nuclear safety there is an international consensus that the responsibility rests with the Member State concerned. In general, I believe that setting common standards at the highest level would not only give better guarantees within the EU, but also help us to ensure high safety standards in the Candidate Countries. That said, I see no prospect of achieving common standards, due to opposition of Member States. (Wallström 1999, interview)

1.4. Nuclear as a vehicle of sustainable development: the revival of the traditional frame in the nuclear energy policy

> *"We have to choose. If we give up nuclear energy, we will not comply with Kyoto."*
> De Palacio 2002, speech in Pamplona

Within the same period as the DG Environment was departing from its nuclear legacy frame in the formulation of the future developments concerning nuclear issues, a rivalry conceptualization was being launched by the non-environmental service of the European Commission. As it will follow from the analysis below, the frame in most of its aspects provided a diametrically different understanding of the challenges that lied ahead of the Commission within the European nuclear energy sector.

The necessarily precondition for the emergence of this alternative frame was the arrival of a new and very energetic Commissioner Loyola de Palacio who was placed in charge of the energy department of the European Commission. The Spanish politician began her term in the office with the firm determination to do away with taboos concerning nuclear power stressing that there was an urgent need to initiate a debate on the subject, seeking to create awareness on the important contribution of electro-nuclear industry to the Union's central goals. Contrary to the vision advanced by DG Environment, De Palacio placed concerns for the decline of the European nuclear industry at the heart of the nuclear energy policy calling for the need of the renewed political support of this sector. In this context the nuclear technology was not only not portrayed as being not compatible with the Union's goal of sustainable development. On the contrary, its use was framed as the very precondition to fulfil this goal in the light of the rapidly gaining issue of climate change.

I will from then and on refer to the policy frame advanced by de Palacio as traditional. It was traditional in the sense that it sought to bring back the goals which had been characteristic of the European nuclear energy policy during the years before Chernobyl. But in the post-Chernobyl

policy space the policy frame was somewhat out of place. To begin with, it broke away with the several decades' long agnosticism of the European Commission on this issue of the role of nuclear technology (Lyons 1992). Most importantly, it did not even come close at reflecting a common view on the issue at the time but sailed against the wind of the popular political opinion within the EU. The majority of the EU member states in the late 1990s did not see nuclear as indispensable. More than that, five out of eight member states who were still operating nuclear power plants declared a moratorium on the future nuclear build and were even planning a rapid phase- out before the end of the actual life-time of nuclear installations (European Commission 2000).

Against this background it is perhaps not surprising that the calls for the revival of political support for nuclear industry were presented under the banner of sustainable development. In particular, de Palacio relied on already solidified elements that were understood as corner stone of sustainable development: environemntal, sectoral and economic goals of the Union should be pursued in a fruitful symbiosis.

But the largest stress was placed on the alleged climate credentials of nuclear power. To that aim DG Energy initiated a scientific study on the issue of the importance of nuclear power technology in the context of the Union's engagement with the objective of climate change mitigation, entrusting this question to a British consultancy. The resulting investigation, known under the title of "Dilemma Study" (DG TREN 1999), saw its light in 1999 and informed the policy frame of de Palacio and her colleagues. The study provided estimations on the contribution of nuclear energy to the reduction of greenhouse emissions in the production of electricity in the EU by 2025 under different scenarios. It is interesting to observe that the report looked at the problem of greenhouse gases from the narrow perspective of a single energy source. Perhaps not surprisingly, its main conclusion suggested that without new investments into nuclear power technology, the Union had no chance of meeting its Kyoto targets. Even according to the scenario where the remaining nuclear power plants (the life-time of which did not expire by the time of writing that report) continued to produce energy, the Union's emissions were expected not to decline but instead to rise by 22 per cent compared to the 1990s levels (DG TREN 1999).

Troubled by the stagnation of the nuclear industry sector as a result of, *inter alia*, political and public disenchantment in many member states, the Commissioner diagnosed this development in the light of the Union's commitment to the fight with climate change as an "obvious contradiction":

> A further option that needs to be considered is nuclear power which allows production of energy without CO2 emissions. Personally speaking, I am not particularly for or against nuclear power. That is not the question. I am however in favour of a systematic and objective evaluation. Nuclear power is an essential tool for the fight against global warming. The obvious contradiction between the nuclear moratoria or even the pull- out decided by some member states, and their engagement at Kyoto, has to be resolved. In my view, a debate on this issue can no longer be avoided. Its strengths and its weaknesses have to be discussed. (de Palacio 2000: speech 00/271

In other words, the energy Commissioner launched an offensive campaign to frame a policy context in which the risks of nuclear technology could not be compared to those of the climate

change, where the latter were given unquestionable priority. In her speeches, the Commissioner went so long as to frame the status of the electronuclear technology as equal with renewable energy sources:

I have already mentioned renewable energy sources and nuclear energy as a means to reduce emissions. These energy sources can also mitigate dependency on energy imports. (de Palacio 2000: speech 00/271)

More than that, the role of nuclear technology was, unlike renewables, framed as indispensable for the Union's commitment to fighting climate change, and ultimately, achieving sustainable development since the input of renewable energy sources was constructed as insufficient:

…renewable energy offers limited potential. Unless decisive new action is taken, it now appears that the share of renewable electricity is unlikely to reach the 21% target by 2010 which the Commission set three years ago.

But there is already today an electricity production technique with effectively zero carbondioxid emission: Nuclear energy!

The Finish decision to build a new nuclear plant shows that nuclear energy remains a very attractive economic option if it is properly managed.

For all these reasons, I believe that the nuclear option must remain open for the security of energy supply and for meeting our climate change objectives. (de Palacio 2000: speech 04/299)

Ironically, while the Energy Commissioner framed nuclear energy as an ultimate and indispensable solution to the problem of climate change, she otherwise, outside the context of nuclear energy policy was not particularly enthusiastic of the Union's initiatives in the area of climate mitigation. More than that, in a series of open statements she questioned the EU's involvement with the Kyoto protocol. De Palacio was even presented on behalf of the environmental organizations in 2004 a "Climate Killer Award" "in "recognition" of her repeated efforts to destabilize EU support for the Kyoto Protocol and related policies" (FoE 2004, online) and undermine efforts of the EU to play a leading role in addressing internationally the issue of climate change.

1.4.1. Energy security

While nuclear power was presented as a saviour technology in relation to environmental problems I propose that the drive for the attempts to revitalise the traditional policy frame can be explained by the reference to the DG Energy's traditional role. Theoretical literature on the behaviour of the Commissioners confirms that it is very much "portfolio-driven" (Egeberg 2006: 64), in the sense that rather than pursuing a unified interest of the Commission, Commissioners champion much narrower goals of their respective DG. In a scenario where the use of nuclear technology for addressing climate change was prescribed more importance than the mitigation of climate change itself, I propose an explanation that the latter served as a "window of opportunity" for the Energy and Transport Commissioner who apparently sought to promote the more traditional goals of her policy portfolio – energy security and support of nuclear industry.

Studying the involvement of DG Environment and DG Energy in the modernization process of nuclear power plants in the accessing countries, Saurugger (2004) stresses how different the priorities of respective DGs were despite a common goal. The energy department of the Commission has traditionally been the guardian of the interests of the electronuclear sector. This role was prescribed to it by the Treaty and historically concerns of nuclear industry has been DG Energy's concerns (Saurugger 2004). Additionally, as a guardian of *de facto* energy policy, the Commissioner saw as its department's duty to address new external pressure that the EU started facing within the general energy sector. The dawn of the new century was marked by the sudden upsurge of oil prices on the international markets and the rise of traditional concerns for energy security.

To make the advanced policy approach appear legitimate and acceptable, the traditional policy frame advocates sought the promotion of these other non-environmental goals dressing them in the language which resonated with the dominant understanding of how sustainable development should be implemented in general. Therefore, while putting the greatest emphasis on the nuclear technology's benefits from the climate change perspective, the Commission demonstrated that the nuclear energy policy effectively pursued other non-environmental goals with the employment of electronuclear technology.

It projected a picture where engagement with the goal of climate change was fully compatible with other policy goals, namely the goals that DG Energy has traditionally pursued, at the same time providing an understanding that her department was engaged with the goals of sustainable development following a win-win recipe which underpinned the general understanding of pursuit of sustanaible development in the EU:

"(T)the path towards sustainable development is still full of challenges, whether they relate to security of supply, competitiveness or the environment"(de Palacio 2000: speech 00/271)

De Palacio sought to highlight that the goals of environmental protection and other sectoral goals were adressed synergetically. Thus, while putting greatest accent on the usefulness of both nuclear and renewable enegry sources in fight for climate change, she also advanced that similar "energy sources can also mitigate dependency on energy imports." (de Palacio 2000: speech 00/271).

1.4.2. **Regulation of nuclear risks**

In addition to the renewal of support to the electronuclear policy sector, de Palacio and her colleagues were advancing another solution to the perceived by them problem of the nuclear energy sector. Just like under the nuclear legacy policy frame, this solution was a regulatory instrument.

However, the scope of the planned instrument was substantially different from the regulation of the electronuclear industry informed by the nuclear legacy frame. De Palacio was concerned by the rapid loss of public support within the nuclear sector and not the state of nuclear safety itself

which she estimated as being at the ”high level” (de Palacio 2001). Rather, the very lack of common regulation was perceived as sending a bad signal to the public:

This aim is to reassure the public at large that nuclear energy developed or operated in the future will meet the same high level of safety on the entire territory of the enlarged EU.”

De Palacio, an avid supporter of the common EU standards, sought to hasten the development and the adoption of the common European nuclear energy standards, a policy competence that the Commission was exercising only *de facto* and only outside the EU territorium as part of the agreement on accession of the countires of Eastern and Central Europe. This approach to regulation was contarary to the one envisioned by Wallström where the strictness of the regulation was of central importance. To that it must be added that the conceptualisation of nuclear risks was based on the idea that they were not qualitatively any different from the risks of other technologies and thus did not require any change of approach.

1.5. An official position then?

As follows from the empirical material, the arrival of the new College of Commissioners led to the emergence of two mutually exclusive belief systems regarding the direction of the European nuclear policy domain. The question is the ideas of which of the policy frames came to be reflected in the Commission's official stance? In fact, this was the question that was frequently raised by the confused members of the European Parliament who wondered whether the future common nuclear energy policy would be evolving along the lines advanced by Commissioner Wallström or Commissioner de Palacio (EP 2002; EP 2002b)? Individual Commissioners influence immensely the direction of the policy within the Directorate General directly under their control, but how was the Commission planning to act as a single institution in the face of the conflicting interpretations advanced by its sectoral departments? Was it planning as a whole embrace de Palacio’s policy frame and was going to encourage and support the revival of the nuclear industry as a response to climate change and energy security concerns? Or was it in the process of neglecting this energy source due to its potential negative impact on the environment and redirecting instead its primary attention to the regulatory aspects of nuclear risks, advanced by the Commissioner for the Environment, Margot Wallström?

Subsections below will attempt to address this question. The analysis begins with the Green Paper on Energy Security, a document that the Commission referred to as its official statement on the issue of nuclear energy role in the EU's future energy system. It is followed by subsequent developments in the nuclear energy policy domain. I will argue, among other things, that the change of the institutional venues resulted in a situation where actors advancing the traditional policy frame became responsible for most of the policy areas within the nuclear energy policy sector. This development the turning point affecting the position of two contradictory policy

frames.

1.5.1. Green Paper on Energy Security

All the requests of the members of the European Parliament to explain the Commission's official stance were met by a referral to the Green Paper on Energy Security adopted in 2000. The Commission's claim was that it was this official document and not statements of individual Commissioners expressed in public that represented the position of the Commission as a whole.

The Green Paper on Energy Security was the Commission's first major energy policy document attempting to raise an issue of energy security to the top of supranational agenda for the first time after the energy crisis in the 1970s. At the same time it was also an expression of the Commission's position concerning those challenges that the Union started facing within the general energy sector. Although the Commission referred to this document in order to disperse the controversy regarding the future approach to electronuclear technology, in what follows below I will argue that the document does little to address the ambiguity concerning the official Commission's position and instead reflects to some extent the priorities of both policy frames, fluctuating between two different policy lines throughout the whole document.

DG TREN was in charge of the original draft of the Green Paper which gave it an opportunity to significantly influence its content. The text of the draft version of the Green Paper captured the traditional frame in its entirety but its adopted official version differed to some extent, suggesting that it underwent some substantial changes prior to its adoption. This indicates that the policy frame advanced by DG TREN was not entirely supported by the majority of voices in the Commission. Describing the process of how the Commission's official documents generally come about, Krämer (2007: 40) underlines the fact that even though in theory the final draft of the proposal which is prepared by one of the Directorate-Generates must be approved by the whole of the College of Commissioners and is therefore open to amendments and suggestions from other departments, in practice it rarely happens. Instead very often the draft is adopted as it was presented by the responsible department. In a situation where the text of the adopted Green Paper differs from its draft points to the lack of full support of the rest of the Commission of the ideas advanced by de Palacio and her department. In fact, most of the radical and provocative statements which the Energy Commissioner inserted into the draft did not find their expression in the official document of the College of Commissioners, because the draft version of this document which was submitted to the College of Commissioners was perceived as very controversial (Greens 2000; EUEW 2002).

Nevertheless, the document goes a long way in supporting many of the central tenets of the traditional policy frame, making only some compromise with the nuclear legacy policy frame. Environmental risks of nuclear technology, central to the nuclear legacy policy frame, do find their recognition in the Green Paper. The official document classifies nuclear power as a "less than a perfect energy source" listing it along with fossil fuels as "undesirables" (European Commission

2000: 31) and proposing the need to invest into renewable energy sources using profits earned from the production of nuclear power (Ibid.).

But at very same time the document supports the position where there should be place for nuclear energy technology in the EU energy mix, providing arguments in favour of this position. To begin with, nuclear risks are marginalised in the face of other environmental problems which are recognised as more important. Highlighting the importance of taking regard of environmental concerns during the exercise of sectoral, non-environmental energy policy, Green Paper stresses at the same time that "special attention should be given to global warming" (European Commission 2000: 77). Such an approach narrows down the scope and focus for environmental protection action within the Union's energy policy. Most importantly, the created hierarchy gives room for downplaying the environmental risks of nuclear power. Upholding the articulations of the traditional frame, it calls for the re-evaluation of the contribution of nuclear technology in the light of its climate-friendly characteristics.

Observing the fact that the nuclear industry is on the accelerated decline, with projected decreases by 50 per cent between 2020 and 2030 (European Commission 2000: 78) the Green Paper praises electro-nuclear technology for its contribution toward fulfilling the European energy goals of energy security and climate change. Simultaneously, concerns over the impact of political and public disenchantment with nuclear technology as well as phase- out processes in the member states - a cornerstone of the traditional policy frame – are reflected in the document. Economic, environmental and energy security goals are indicated to be affected negatively as a result of those on-going developments and in that context a re-evaluation of this technology is called upon:

> The nuclear option must be examined in terms of its contribution to security of supply and greenhouse gas emission reductions. Nuclear energy saves Europe around 300 million tonnes of CO2 emissions per year. This is equivalent to taking 75 million cars off the roads. (European Commission 2000: 86)

Again, the Commission's Green Paper motivates its calls for the re-evaluation of this marginalized energy source highlighting environmental protection and energy security, but also seeks to demonstrate that, in line with the goal of sustainable development, there is a win-win siuation in employing electronuclear technology referring to nnits competitiveness. The Green Paper in an uncritical voice maintains that

> …the nuclear energy sector has become competitive and is a source of considerable income for operators. The latter no longer need public aid or Euratom loans. These loans are currently being used by applicant countries to help modernize their installations. (European Commission 2000: 32)

This choice to portray nuclear power industry as economically viable contrasts with concerns that were spread in connection to the ongoing liberalisation of the energy market where energy plants were to compete without government subsidies – a nearly insurmountable challenge for the industry such as nuclear with disproportionately high capital costs and which have always enjoyed protective and supportive operational environment. And the fact that the Euratom loans were being used to modernize nuclear power plants in countries of Central and Eastern Europe and not

to the operators of nuclear power plants contrasts with the decision of the Council of Ministers. In this document the representatives of the Member States, motivated their decision to direct nuclear funds towards “improving the degree and efficiency of nuclear power stations in certain member states” (Council 1994) referring to the changed situation in the nuclear sector affected by the rapidly falling demand:

Whereas, following the slowdown in the nuclear energy sector and the changes in nuclear energy policy by some Member States, there will not be a strong demand for the remaining finance from nuclear energy projects (Council 94/179/Euratom via Froggatt 2002: 35-36).

In other words, the Green Paper refected essential components of the traditional policy frame, but toned down the DG Energy's position. The fundamental difference however was that unlike in the position advanced by DG TREN, the Green Paper does not go as far as advancing the electro-nuclear technology's indispensability in the future energy system of the EU. Most importantly, the paper denies the impossibility to meet the Union's climate goals without the increased reliance on nuclear energy despite de Palacio’s efforts to convince of the opposite. In a clear and unequivocal manner the paper states that:

The present phase-outs do not affect the Community’s ability to fulfill Kyoto objectives from 2012. (European Commission 2000: 86)

This was perhaps one of the more well-defined official Commission’s position in the paper on the role of electro-nuclear technology.

On the whole, the document projects uncertain position of the Commission and attempts to find a compromise between the two very different frames. While the document recognizes the seriousness of environmental problems of electronuclear technology as in the nuclear legacy frame and consders nuclear power as being ”undesirable” (Commission 2000), it at the same time speaks in an optimistic and unproblematic tone about the contribution of nuclear energy to the sustainable development agenda of the Union. Nevertheless, the stronger influence on the Green Paper of the traditional policy frame is unquestionable. We see that climate risks are already given priority at the expense of the broader conceptualization of risks within the energy sector, in this way marginalizing the importance of risks presented by the nuclear power. Most importantly, the central element of the traditional policy frame – concerns for the disenchantment with electronuclear technology - also finds its way into the paper. The Commission raises concerns that the labeled by it in the first part of the paper ”undesirable” energy source lacks the necessary benefecial environment for its development. In this context environmental risks are need to be addressed not for the sake of them being environmental risks *per se* but because addressing them may ensure stability as well as political and public support. Apparently, nuclear safety is not considered as such a high priority as it is nuclear waste. More than a decade after the Chernobyl catastrophe of nuclear power use without accidents solidified the idea that these were the nuclear reactors of the Soviet type that presented danger, not Western-type reactors. Finding a solution to the problem of nuclear waste is portrayed as a precondition for the future smooth development of the nuclear energy sector:

Nuclear cannot develop without a consensus that gives it a long enough period of stability, bearing in mind the economic and technological constraints of the industry. This will only be the case when the waste issue finds a satisfactory solution with maximum transparency. Research in this area should be oriented towards waste management. (European Commission 2001: 34)

1.5.2. The internal re-organization and subsequent policy developments

The lack of clarity in the official policy line of the European Commission regarding nuclear energy technology have characterised the early days of the new College of Commissioners; compromise between the frames did not appear to be within a reach due to the clash between mutually exclusive conceptualizations on the future of the European energy policy.

The internal re-organization at the end of 2000 helped to bring about the change into the balance of powers, and resulted in more clarity of the Commission's position. A the beginning of 2000 the Commission declared that it sought the achievement of the “concentration of expertise” in the nuclear energy policy area and as a result sought to restructure the existing division of competences (European Commission 2000b). This meant in practice that DG Environment was from then and on to be stripped of a number of important responsibilities that were crucial to the exercise of the nuclear legacy frame. To be more specific, a portfolio concerning the regulation of nuclear safety and waste management – issues that were at the very centre of the nuclear legacy frame – were moved to its frame rivals in DG Energy.

The question of the extension of the Commission's competences to embrace the regulation of nuclear safety at nuclear installation has become one of the Commission's urgent priorities prior to the Union's enlargement scheduled by 2004. To be more precise, while the Treaty did not bestow the Commission with such a mandate, the Commission had already been exercising these powers *de facto* in the candidate countries. But once these countries were to become part of the Union, the Commission would however have lost all of its powers to control the nuclear safety situation; the exercise of regulatory powers was accepted by the candidate countries as a part and parcel of the accession process only. Then, just like in the case of the old member states, it would have been the Euratom Treaty that would have to be applied in relation to the exercise of the nuclear energy policy - and the latter did not foresee any interference into questions of safety at nuclear installations, regarding it as a national question.

Therefore, the pressure has been high on the Commission to find a way out of the situation, and extension of its de facto powers to apply on the European Union's ground. Yet, DG ENV was reluctant to pursue the regulation on nuclear safety within the European Union unless there have been signs that an adoption of a high level of nuclear standards was possible, something that the current Commissioner Wallström did not expect to see in the short run (Wallström interview 1999).

On the contrary, DG Energy, headed by an adamant supporter of the common regulation in the domain Commissioner de Palacio, had been since the arrival of the new Commission demonstrating enthusiasm for common safety standards and regulate aspects of nuclear waste management. Additionally, the Commission's energy department had traditional links with nuclear industry – an important stratetegy in the context of the Commission's lack of technical expertise combined with human resource deficit.

Following the internal re-organization, DG Environment, Civil Protection and Nuclear Safety was transformed into DG Environment (DG ENV) and retained only a small portion of nuclear competences relating to the protection of the health of workers and general population. In its turn, DG Energy became DG Transport and Energy (DG TREN) and was transformed from the competitor on the policy arena into the legitimate sponsor of the traditional policy frame, acquiring control over many aspects of the future nuclear energy policy and thus its future contours.

The significance of the transfer of crucial responsibilities should not be underestimated. On the one hand, the development witnesses of the greater influence of the ideas which have underpinned the traditional policy frame. As the literature on policy framing informs (see in particular Jones & Baumgartner 2002), the choice of institutional venues has a decisive influence on how a policy issue, which has always a potential of being conceptualized from multiple perspectives, is defined. This is especially relevant for the European Commission, departments of which are prone to processing issues and conceptualizing solutions from the perspective of very narrow policy areas they are responsible for (i.e. Egeberg 2006). In other words, the choice of an institutional venue has a biasing effect on the policy issue. In fact, the analysis of the empirical material witnesses that nuclear energy was being increasingly conceptualized in terms of energy security and industrial interests – a priority of DG TREN – rather than concern for its environmental risks. The transfer signified the first defeat for the evolution of the environmentalist policy frame which initially existed within the Commission parallel to the traditional policy frame conceptualization of electronuclear policy.

This explains why the development came under the harsh critique of the influential at that time alliance of environmental organizations Green 8. Sharing with DG Environment the ideas underpinning nuclear legacy policy frame, did not saw a real problem in transferring a competence in nuclear safety and waste to the Commission’s department which had been traditionally known for its enthusiasm over the employment of nuclear technology in the European Union (Saurigger 2004; Lyons 1992; 1998) and, being in charge of the general energy policy in the European Union, was a department which interpreted the obligation of the Euratom Treaty to promote the rapid growth of nuclear industries as its own concern (Ibid.; Lyons 1992: 45). The then leadership of the openly pro-nuclear Commissioner Loyola de Palacio did not make matters look better. The lack of the necessary competence would from then and on significantly constrain DG Environment in its ability to speak on the issue of nuclear energy. The transfer moved the center of gravity from DG ENV to DG TREN, affecting a development of the Commission’s official position on the role of nuclear power towards the conceptualizations advanced by the latter. The move had also serious

potential consequences for the regulation of nuclear risks, a policy issue which would climb high on the Commission's agenda within a few years.

Being at that time de *facto* policy area, employed predominantly in relation to the accessing member states, the competence of nuclear safety was probably not viewed as very important in 2000. This may explain why, apart from a few critical voices, the above described transfer did not otherwise attract political attention in the EU. It nevertheless had a potential to be transformed into such, given that there were many preconditions for the development of a common safety framework and binding rules in this area. From the interstate conflicts between Member States to a growing awareness of the eventual inability of the Union's institutions to control the safety at nuclear plants located in the territory of the accessing states after the fact of accession has taken place – everything spoke for the fact that the common rules would be introduced in the near future. Will DG TREN be able to balance its newly acquired regulatory role with a more traditional role of a promoter of nuclear energy?

1.5.3. After the institutional re-organization: Sustainable Development Strategy

As it could be expected, the influence of the nuclear legacy policy frame on the direction of the domain weakened after the transfer. Unlike in the earlier documents to which DG Environment was *chef de file* and which explicitly recognised the environmental implications of nuclear technology, policy prescriptions adopted after the Commission's internal re-organization has adopted a nearly neutral stance on nuclear technology.

The Commission's landmark document of the post-transfer period was Sustainable Development Strategy "A Sustainable Europe for a Better World" (2001). Prepared specifically for the Gothenburg European Council which was to meet in order to discuss the details on how an environmental dimension can be added to the infamous Lisbon Strategy which was predominantly focused on economic growth and employment, the paper was intended to articulate the Commission's position on how the transformation into a sustainable European Union should proceed, sketching out a general framework concerning the areas in need of attention and suggested practical solutions. In this document the Commission specifies that a fight with climate change should be a priority within the process of the Union's involvement with sustainable development.

Among many measures which are prescribed for combating global warming at the EU level, like the introduction of the carbon tax, proliferation of clean and renewable energy sources etc, the Commission mentions "support to the research, development and dissemination of technology" for "safer nuclear energy, namely the management of nuclear waste" (European Commisson 2001). This is actually the only time the Commission mentions electronuclear technology in this document, and the statement is far from being clear cut. Is this an evidence that the Commission as a whole recognizes the fact that nuclear energy is an indispensable part of the Union's strategy for addressing climate and, eventually, reaching sustainable development? This little paragraph

appeared to cause a wave of criticism on the part of several environmental NGOs which interpreted it as an adoption by Commission of a policy course which did not place environmental concerns at the center. For instance, the supranational ENGO- network Green 8 criticised the Commission's deviation from the ideas which underpinned the nuclear legacy policy frame .

Green 8 wrote an "Open letter to heads of state and government on the Sustainable Development Strategy" (2001) calling for an immediate rejection of such a move as inappropriate in relation to sustainable development goals. In a later more detailed review of this document (Green 8 2004), the environmental network directed a harsh critique against the way the Commission treated an important for sustainable development issue. Green 8 found the Commission's objective "flawed" since on the one hand it referred to the need to deal with nuclear waste and in this way was compatible with sustainable development goals, but on the other hand it simultaneously supported a continued use and development of nuclear technology which according to environmental organizations went against the commitment to sustainable development (Ibd.). Referring to both environmental (longevity of the produced nuclear waste, uranium mining, danger of nuclear accidents) and economic factors (there are much cheaper ways to produce electricity), the Green 8 called for the end of the "institutionalized promotion of nuclear power" the revival of which Commission's Sustainable Development Strategy was arguably witnessing of (Ibd.), this time by converting it to a sustainable development argument. As it can be seen on the example of many documents, the Commission had difficulty in arriving at a common position concerning the role of nuclear technology in relation to the operationalisation of the Union's sustainable development commitment. Many of its official documents are filled with inconsistencies and sway between different policy frames. But the less pronounced focus on nuclear risk in the documents where DG Environment was chef de file clearly witnesses the general weakening of the nuclear legacy policy frame within the European Commission.

The traditional policy frame, on the other hand, becomes increasingly more influential. The Euratom Research Framework Programme approved by the Commission in 2002, provides an illustrative example of how the idea of the actual and eventual compatibility of nuclear technology with sustainable development is incorporated into the Commission's official position on the role of nuclear energy in the future energy system. A sum of some 1,230 Euro was made available for addressing issues to "promote sustainable nuclear power in Europe" (News Rapid 2002 17 June). Commenting the development, commissioner in charge of the DG Research Philippe Busquin said:

> Safe and sustainable nuclear energy is a priority for sustainable development: it can greatly contribute to meeting Kyoto requirements. … The debate on nuclear energy should be kept open so as to include clean nuclear energy in the broader framework of sustainable development. (Basquin 2002 via News Rapid 2002).

1.6 Conclusion

The turn of the century became a turning point for the European nuclear energy policy. Ageing

power stations, increased interstate conflicts over energy security, upcoming enlargement, challenges of climate change and energy security, the consolidation of the commitment to sustainable development, and, especially, the arrival of the new College of Commissioners - all provided a rationale for action within the common nuclear policy. Treated by the Commission in the post-Chernobyl period as a taboo subject, nuclear made a powerful comeback onto the Commission's policy arena. The chapter has strived to understand what dimensions lied at the heart of the reinvigorated involvement of the Commission with electronuclear policy and how we can understand them from the commitment of the Commission to pursue the objective of sustainable development which was solidified into the EU Treaty.

The analysis revealed that the arrival of the new College of Commissioners was not only marked by the return of the subject of nuclear technology to the policy agenda but the emergence of the two strikingly different policy frames advancing different development trajectories for the electronuclear policy area. On the one hand, the policy frame advanced *inter alia* by DG Environment reflected a belief that the use of electronuclear technology represented a problem both from a narrow perspective of environmental protection but even a wider commitment to sustainable development. At the heart of this frame lied the refusal to support nuclear energy industry, the ultimate decline of which had already been a fact at the beginning of the century. The frame drew on the broader ideational context in which electronuclear technology lost public and political support and its use was not even consistent with the broader goal of economic development. The frame projected an approach that primarily focused on the element of (strict) regulation with the purpose of focusing on the legacy of the nuclear industry - waste management and nuclear safety - competences that were still to be added to the Commission's portfolio.

Contrary to this vision, the non-environmental energy department DG Transport and Energy sought to see the return of the traditional policy frame to the nuclear energy policy, a dominant policy paradigm that had shaped the trajectory of the European nuclear policy since its inception and lasted until the disaster in Chernobyl. That vision was underpinned by the idea that nuclear energy was an answer to the major problems that the EU was facing, a saviour technology and an indispensable component of the European future energy system. The understanding of the problem in this sector was not technology's side-effects and risks, but decline of the industry due to the loss of public and political support, therefore restoration of the latter was sought.

An ideational environment exercises both constraining and enabling effects on the policy-making. Ideas that do not fit into this broader framework has little prospect of finding support. Thus, in order to appear legitimate, policy frames have to resonate with broader ideas and values. Therefore frame entrepreneurs often seek to adjust the way they *rhetorically* frame their policy packages to make them fit into this broader worldviews (Sikkink 1991). This is done *without* changing the “content” of the frames themselves. Also, policy frames should resonate with metaframes. In this case sustainable development increasingly constituted an interactive context within which policy-framing and bureacratic politics were taking place (Eder 204) and was thus a metaframe.

Empirical material suggests that the nuclear legacy policy frame fitted naturally within the overal ideational context of the study period. In this context characterised by the general distrust of electro-nuclear technology and its obvious decline, focus on the regulatory aspects of nuclear safety and waste management appeared logical and natuaral.

The goals of the traditional policy frame were on the contrary out of tune with the general context. An idea of promotion of the sunset technology, marked by low public support and very questionable economic viability did not appear attractive. Nevertheless, the advocates of this frame made efforts to adjust their framing arguments rhetorically to fit them into the general ideational context. Unlike the advocates of the nuclear legacy policy frame, DG Transport and Energy exhibited more aggressive and persistent framing efforts.

The institutionalisation of sustainable development and, in particular, environmental protection did not only have an effect of making sectoral departments of the Commission consider environmental concerns in the formulation of their policies. It also put them in charge of the sustainable development implementation, shoulder to shoulder with the traditional environmental Commission's department. It led to the competition over the future of nuclear energy policy not the least via the definition of what the pursuit of sustainable development constituted within the energy sector.

The traditional policy frame entrepreneurs thus advanced their ideas dressing them into the language and formula which resonated with the general understanding of how sustainable development should be implemented in general. The meta-theory in the form of sustainable development could hardly be called constraining on the traditional policy frame since it was limited to the elements of cost-effectiveness and policy integration. The process of institutionalisation of sustainable development was just unfolding, and concrete objectives of sustainable development were still lacking within the energy sector and also electronuclear sector. By mere virtue of engaging with the goal of sustainable development, DG Energy and Transport turned into DG Environment's competitor not only concerning the trajectory of nuclear policy but also the scope of action under sustainable development. In other words, two policy frames were not simply located at the pro- and anti-nuclear junction. Rather, throughout the years analysed, they reflected and *shaped* different visions on how sustainable development within the general energy sector was to be institutionalised.

Advanced by DG Environment approach heralded an entirely new development in the management of risks, suggesting the birth of the reflexive governance. It pressuposed a complete reassement of the earlier practices in the management of environmental problems underpinned by the recognition of uncertainty and ambiguity of certain risks. It was seeking to break away from the traditional approaches when it came to the management of environmental problems and risks in particular.

On the other hand, the traditional policy frame advanced by DG Transport and Energy, did not foresee any changes to the style of solving problems. It was underpinned by beliefs into scientific

and technological progress as well as its ability to adress even the most complex and ambiguous environmental problems.

The turning point which determined the influence of the frames was the transfer of responsibilities. While nuclear energy policy had existed since the inception of the European Union, the institutional settings surrounding certain policy issues were still rather vague. In this context the internal re-organization was easier to carry out. Transfer of policy-making responsibilities boosted the frame advanced by DG Transport and Energy *vis-á-vis* the nuclear legacy frame; while the latter frame was still present its influence was significantly weakened.

Sustainable development represented a powerful weapon in burecratic politics. By referring to the positive contribution of electro-nuclear technology in relation to the pursuit of climate change objectives, the advocates of the traditional policy frame sought to turn around a negative image that electronuclear technology had acquired after Chernobyl. Far from being a sunset industry and a "dinosaur from the last century" (Greenpeace 2011), at the turn of the century the nuclear sector was being increasingly framed as dynamic and flexible technology with a good potential to be able to assist the transition of the countries of the European Union into a sustainable future, provided it became endorsed with renewed political and public support. It significantly reinforced the position of electronuclear technology in the EU: any argument against the reliance on nuclear technology could be interpreted as an argument against the commitment to sustainable development itself. At the same time a trajectory of sustainable development was increasingly being shaped by beliefs in rationality and progress which have underpinned the erlier efforts of environmental management.