INTERNATIONAL CONFERENCE
The Tenth Conference on European Union, Portuguese and American Law
WASHINGTON, D.C. - April 7 - 8, 2011
Columbus School of Law, Catholic University of America
1st/Opening Session – 7th April 2011

Regulation of the Energy Sector in the EU

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The European internal energy market, serving about half a billion people in 27 Member States is the largest integrated energy market in the world. It is true that electricity and natural gas consumption are higher in the USA than in the EU but, differently from what is happening in Europe, energy systems in the USA tend to be physically and legally separated into several sub-systems and a significant part of energy consumers is not free to choose suppliers. Conversely - and representing somehow a contradictory or even incoherent feature - the EU is still battling to establish and consolidate truly supranational regulatory institutions like the Federal Energy Regulatory Commission (FERC) in the US, a fact which is due to the rather peculiar EU institutional architecture (peculiarities which influence sovereign debt market turmoil that we are experiencing today but are also present in the domain of energy regulation).

Beside these specific European challenges involved in providing an adequate regulatory framework to an internal energy market only recently created in the EU, my other ‘leitmotif’ in this presentation has to do with the acknowledgement that the energy systems of the 21st century will be extremely different from the energy systems of the previous century, which, in turn, will require a true reinvention of energy regulation. I shall argue that the EU regulatory framework, despite barely “invented” 10 or 15 years ago, in the context of the liberalization of national energy markets of the Member States, and notwithstanding its numerous gaps, is somehow in a pivotal position to lead the way towards the adoption of new regulatory policies to the energy sector (because it is new, very adaptable and based in multiple building blocks).
The general theme of regulation of the energy sector in the EU may be covered from several different perspectives. Due to time constraints I shall focus my attention on three main interlocked topics: (i) On the one hand, I shall briefly refer to the issue of EU energy dependency and the way it may seriously condition an European sustainable economic growth; (ii) on the other hand, I shall cover a set of issues related with the gradual building of an internal energy market at the EU aimed towards competitive and efficient energy markets – assessing in the process its regulatory pillars. (iii) Finally, in the context of the regulatory pillars of the internal energy market I shall very briefly refer to some elements of possible reinvention of energy regulation in the EU oriented towards market restructuring and introduction of new technologies and new energy infrastructures.

Despite the fact that from the start of the European integration process the energy sector was considered as a vital area, demanding some form of coordinated action – which was duly reflected by the Treaties concerning certain aspects of the energy sector (European Coal and Steel Community and the European Atomic Energy Community)\(^1\) – the more broad and fundamental of these supranational communities in which such European integration process has been anchored [the original European Economic Community (EEC), now European Union)] somehow surprisingly did not contain any original provisions on energy policy (we refer obviously to the original Treaty of Rome).

That omission had far reaching consequences. In fact, the lack of provisions in the EEC Treaty on energy prevented the formation and the

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\(^1\) On these Communities, both from an historic perspective and considering more recent developments, see, *inter alia*, MICHELLE CINI (Ed.), *European Union Policies*, Oxford University Press, 2006; D.G.VALENTINE, “Amendment of the Europenan Coal and Steel Community Treaty”, in International and Comparative Law Quarterly, 2008.
consolidation of any form of global common policy on energy, from the adoption of the Treaty till the first oil shock of the seventies. In that context, there was no actual EEC reaction to such oil shock. Essentially, the Member States acted on a unilateral basis. Some common reaction to the core issues associated with the supply of energy to the EEC markets was envisaged after the second oil crisis, but it was only with the internal market program that broad legislative initiatives in the electricity and gas sectors were implemented. Furthermore, it was only with the Maastricht Treaty that measures in the sphere of energy were listed among the different activities of the Community and that new articles were added on the promotion of trans-European networks, comprehending namely energy infrastructures. Among other things, these omissions and the lack of a clear legal basis for energy policy has resulted in the absence of a true EU-wide energy regulator in charge, namely, of developing interconnectors even after the liberalization process begun. It also somehow prevented the European Commission from holding powers to alter property rights in the Member States and to carry a more active policy of de-integration of energy groups.

This situation has changed, albeit on a limited basis, with the Lisbon Treaty and the new Article 194 of the Treaty on the Functioning of the European Union (TFEU) through which it was attempted a consolidation of the existing goals and instruments of European energy policy. However, this new provision does not fundamentally grant new competences to the Union and paradoxically could even weaken the current foundations of EU energy policy (for instance, and in theory, we can not entirely rule out that a decision of the Commission under the competition rules could be challenged on the basis of this new Article 194 TFEU for not duly considering national security of supply or other concerns).
The project of the European Union (formerly European Community) to liberalize and integrate energy markets and – in the process – to regulate such internal energy market has repeatedly been characterised as unique in its scale and in its extremely complex allocation of competences between Member States and the European Union Level.

The adoption of the Directives on the internal market for electricity and gas gave a definite shape to the Community energy policy. We should refer here the first generation of Directives on electricity and gas, starting on 1996 – including EC Directive 1996/92 (common rules for the internal market on electricity) and EC Directive 1998/30 (common rules for the internal market on gas) - and the second generation of Directives in this field, of 2003, including Directive 2003/54/CE (electricity) and Directive 2003/55/CE (gas).

Notwithstanding this liberalization effort, which was globally oriented towards creating open and more competitive energy markets, there remained a basic challenge of energy supply security in the EU, particularly considering that we are nowadays confronted with what may be termed as a third energy shock (quite different on several points from its predecessors on account, inter alia of a set of more structural and permanent factors underlying this energy crisis).

This situation of growing dependence of the EU on external energy sources has led the Commission to publish in 2000 a Green Paper designated


“Towards a European Strategy for the Security of Energy Supply”, which was to be followed by another one in 2006, entitled “A European Strategy for Sustainable Competitive and Secure Energy” (and by other discussion and policy papers that I shall not quote exhaustively).

Above all, these crucial issues - associated with ensuring Europe’s energy supply - are underlying the current EU third legislative package on energy, presented in September 2007 and finally approved after a difficult negotiation process in the first semester of 2009.

Despite these recent analysis of different scenarios regarding energy supply, and also even more recent political initiatives concerning the interplay of the EU with other economic areas in order to promote energy efficiency internationally –as the so called “international partnership of energy efficiency cooperation” agreed in the context of the G8 (‘Group of the eight more industrialized countries’) upon an EU proposal – the basic underlying problem of EU energy dependency has not been solved and, on the contrary, the creeping and apparently structural oil crisis has aggravated it.

This new awareness of the negative prospects in terms of energy supply has, however, paved the way to some new significant initiatives at the EU level beside the aforementioned third legislative package on the energy internal market and its regulation. On the whole, a significant part of those initiatives are aimed towards a more diverse energy mix, diversifying

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9 On the main components of the EU third legislative package on energy, of September 2007 see infra, 3.2.2.).
10 “International partnership of energy efficiency cooperation” discussed at the G8 Heiligendamm Summit of June 2007 and very recently agreed on June 2008 in the context of the 2008 G8 presidency, involving also in that process beside the G8 countries, China, India, South Korea (and, of course, the EU as such).
energy sources and transit routes, which implies considering the nuclear option and the renewable energy sources. In this context, the Commission has put forward proposals for a **long term renewable energy road map** which brings about binding energy targets to the Member States in terms of *renewable forms of energy*, thus creating what may come to represent a more robust common energy policy and less of a soft policy limited to statements of intentions. This *renewable energy road map* implies the adoption of several EU Directives, on which the present paper will not expand (since that would require an autonomous ‘ex professo’ analysis which considerably exceeds the purposes of the paper).

Without denying the importance of these ad hoc initiatives, it should be emphasized that the bulk of the progress in order to tackle the fundamental problem of EU energy dependence lies in ensuring **more efficient energy markets**. That structural broad goal, in turn, is essentially related with the **deepening of the EU energy internal market** and on establishing the **proper equilibrium to its functioning**. I shall argue that such desirable outcome, in turn, largely depends on a **proper regulatory structure for the energy sector** (and with that assumption in mind, some essential topics should be considered in the field of liberalization and regulation of energy markets).

In this crucial field of liberalization and regulation - and as several commentators have already emphasized - the energy sector may be somehow in an intermediate position between two extreme situations as regards EU liberalization processes.\(^{11}\) One of those extremes is represented by telecoms – a sector in which the wired and wireless technological and economic ‘revolutions’ meant that little remains of the past natural

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\(^{11}\) On this point, and for a comparative perspective about liberalization of the energy sector *vis a vis* other sectors, considering also concomitant regulatory and competition problems, see, *e.g.*, J. FAULL, A. NIKPAY, *The EC Law of Competition*, (2end edition), Oxford University Press, Oxford 2007.
monopolies. One of the other extremes may be represented by the water sector, as an industry where natural monopoly elements remain to a large degree in place. Energy may be in some sort of middle ground and, therefore, EU liberalization and regulatory measures concerning the energy sector are somehow at a critical and sensitive crossroad.

This is an economic sector in the EU to which applies particularly well the much quoted conditions defined by authors such as MICHAEL BEESLEY and STEPHEN LITTLECHILD about the regulation of former monopolies. Clearly, the focus here lies on facilitating the durable entry of new competitors, which may imply a three step approach, comprehending, namely: (a) focusing on likely patterns of market entry; (b) identifying options which are open to the regulator and finally (c) choosing options which are likely to have the greatest positive impact on entry.

Considering this perspective, the second generation of EC energy Directives (of 2003) were intended to accelerate the market liberalization and to create truly open and competitive energy markets. With that overriding goal the 2003 Directives identified some fundamental barriers to energy sector liberalization and competitiveness and attempted to find solutions for those issues. In particular, reference should be made here to key issues, such as:

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(i) The vital importance of energy network operators and the need for at least a legal and financial unbundling of these operators;

(ii) The need for a transparent, non discriminatory and predictable system of access to energy networks and related infrastructure;

(iii) The requirement established in the Directives that Member States should create national regulatory authorities with a sufficient degree of autonomy and effective powers of intervention in the market in order to address the two previous aspects [(i) and (ii)].

However, after the implementation of the 2003 Directives the recent European Commission Inquiry into competition in gas and electricity markets - whose final conclusions were presented on January 2007 clearly implied that the measures and powers put forward by such second generation Directives were not sufficient to ensure actual open, competitive and efficient energy markets.

In short, the main negative findings of this energy inquiry comprehended namely:

(1) Excessive market concentration and slow development of wholesale energy trade;

(2) Vertical integration of incumbents and foreclosure of markets barring new entrants – these markets being characterized by long-term contracts and lack of liquidity and the resulting lack of available gas and electricity that could be acquired by alternative providers;

(3) Little cross border integration – with Gas and electricity markets remaining still largely national – and difficulty to secure transit capacity in key routes (e.g., Argelia-Russia) in gas and insufficient interconnector capacity in electricity;
Lack of transparency and high barriers to market entry;

(5) Lack of fair competition in the functioning of the wholesale markets (probable anti-competitive practices). These negative findings, arising from the Commission Inquiry into competition in gas and electricity markets have directly influenced the new regulatory step arising from the ‘third legislative package on the energy sector’ of 2009.

Furthermore, a sixth overriding deficiency identified in the Inquiry referred to a “gap in the regulatory environment: a persistent regulatory gap particularly for cross border issues. The regulatory systems in place have loose ends which do not meet”

These negative findings, arising from the Commission Inquiry into competition in gas and electricity markets have directly influenced the new regulatory step arising from the ‘third legislative package on the energy sector’ of 2009.

On strictly formal terms, the main components of this third EU legislative package of July 2009 on the electricity and gas markets, include a (i) Regulation Establishing an Agency for the Cooperation of Energy Regulators, a (ii) a Directive amending Directive 2003/54/CE - Common Rules for the Internal Market on Electricity and a (iii) a Directive amending Directive 2003/55/CE - Common Rules for the Internal Market on Gas.

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The limited scope of this short paper does not allow any kind of extensive elaboration on this revised legislative framework. I shall merely concentrate on two focal points. The first one corresponds to a trend towards the reinforcement of the separation of energy supply and production activities from network operations, including transport and distribution of energy (which implies a preferred option of ownership unbundling of those two types of activities). The second point concerns the establishment of a new EU agency for the cooperation of energy regulators.

On the first point, it is clear that the best approach envisaged in the September 2007 proposals corresponded to the ownership unbundling of, on the one hand, energy supply and production activities and, on the other hand, network operations, including transport and distribution of energy (following the preceding 2003 option of a mere legal and financial unbundling of such activities). Notwithstanding that preferred solution, the final compromise reached in 2009 allowed the Member States to choose between several alternative arrangements in terms of restructuring vertically integrated groups. In particular, the revised 2009 framework allowed for a so called alternative option, which would largely correspond to a derogation from the ownership unbundling approach (a solution identified as the establishment of an independent system operator).

What is essentially at stake under this independent system operator option is the possibility for vertically integrated energy companies – comprehending large French and Germany energy groups with substantial market power – to retain the ownership of network assets with the proviso that such networks would be managed by an independent transmission

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19 We are referring here to large energy groups and former state monopolies such as EDF or GDF in France or E.ON and RWE in Germany.
operator system (under detailed rules on autonomy, independence and investment plus a specific revision clause which can lead to legislative proposals in the future by the Commission). While there are undeniably some legal issues associated with a full ownership unbundling option – e.g. related with the proportionality principle – this has, above all, become a politically contentious and sensitive issue and the final compromise solution may owe more to political than to technical considerations. As things stand, on the basis of the compromise solution at stake the idea of dissociating ownership and day to day management decisions concerning network grids and infrastructures may prove hard to implement. Particular hardship will involve the establishment of actual monitoring procedures that may assess the autonomy levels of the management of those infrastructure and assets. The governance structures and procedures to be actually developed in order to ensure the effective independence of the transmission system operator will probably involve a too complex and elaborate regulatory machinery (so it can be argued that the potential for failure associated with very elaborate ex novo regulatory machineries is great). In this context, while there are disadvantages in adopting solutions perceived by the market as non definitive or non stable it may be convenient to leave open the option of a later review of the independent transmission operator system to check its actual efficiency (on the basis of the specific revision clauses included in the new 2009 framework).

On the second point, involving the establishment of an EU new Agency for Cooperation of Energy Regulators (ACER) – also independent from the Commission – this initiative is related with two main areas: (i) the establishment of some kind of regulatory oversight of the cooperation

20 On these issues see, inter alia, SABRINA PARDUROUX, KIM TALUS, “The third legislative package and ownership unbundling in the light of the European Fundamental Rights Discourse”, in Competition and Regulation in Network Industries, March 2008, pp. 3 ss.
between transmission operators systems (oriented towards cross-border integration of networks) and (ii) the attribution of a certain degree of decision power to a new supranational body focused on cross-border issues (in the event of disputes on cross-border issues this body should resolve conflicts within a reasonable time frame).

The ACER corresponds essentially to what we have been qualifying, under EU law and soft law, as a “network agency” providing an institutional basis to foster closer regulatory convergence between Member States and moving beyond the mere coordination of procedures and the exchange of information and best practices related with the regulatory network of national agencies that were established due to impositions contained in the 2003 legislative framework. This regulatory model carries with it considerable risks and uncertainties because it brings into existence a multi-level regime with different lines of responsibility running between the E. Commission, the ACER, the Member States and their National Regulatory Authorities (NRAs). Furthermore, at another level the ACER may lack some effective powers when confronted with another new institutional reality, corresponding to the European Network of Transmission System Operators for the gas and electricity networks, which will act in connection with remaining vertically integrated companies. In fact, such European Network of Transmission System Operators will be entrusted with large powers to approve market and technical ‘codes’ (in some cases prevailing over NRAs). It seems that, as regards these extensive powers of the Transmission System Operators, the ACER would basically have a mere advisory role, which may prove insufficient to counter those powers.

Coming now to a final and more positive note, it should be recognized that the EU regulatory framework for energy, despite its complexity related
with the originality of the institutional architecture of the EU and regardless of its remaining regulatory gaps after the third legislative package of 2009, has, conversely, some advantages arising from its dynamic nature and adaptability. As referred at the beginning of this Paper, those advantages may place the EU model in a pivotal position for leading the way internationally towards a true **reinvention of energy regulation**. A **reinvented energy regulatory policy** must go beyond the traditional goals of promoting consumer rights and economic efficiency in energy markets. It must involve – in response to a new global environment – at least two more demanding objectives:

**(1)** - To provide appropriate incentives to the modernization of energy infrastructures aiming especially at improving energy efficiency at all levels (generation, transmission/distribution and use), increasing the penetration of renewable sources and facilitating the development of new services. This absolutely requires a new proactive regulatory approach to infrastructure planning and operation.

**(2)** - To actively encourage the use of available funds and financial instruments by energy undertakings in order to accelerate investments necessary to modernise the energy infrastructure through the massive introduction of information and communication technologies, to increase the connectivity of electricity and gas networks or to diversify and decentralise supply sources. I am referring ‘*inter alia*’ to processes widely known as “**smartening the energy grids**”. The existing grids or networks are ageing which will lead to more power outages and a decline in reliability (in Europe the majority of the assets in the energy networks date back to the period from 1960 to 1990 with a peak in the 1970s, this being caused by a structural growth in energy consumption in that period). In this context, new regulatory policies and techniques should play a central role
to maintain or enhance the reliability of ageing grids through appropriate replacement strategies (which will not involve necessarily major grid expansions but may, to a large extent, be achieved through the smartening of the grids, based on the introduction of communication technology elements that can facilitate and control a significant part of the flexible demand for the fluctuating distributed supply of energy). This, in turn, requires investments and medium and long term strategies. One of the key dimensions of a reinvented energy regulation lies in providing regulatory constraints and incentives to those types of investments and strategies.
ANNEX

We have deliberately avoided to overcharge this Paper/Presentation with excessive information references about energy regulatory policies and national regulatory policies and structures.

Extensive information on these issues can be easily obtained through the SITE of the International Energy Regulation Network (IERN) – http://www.iern.net/portal/page/portal/IERN_HOME/REGULATION_COUNTRY. IERN is a CEER (Council of European Energy Regulators) initiative launched in 2005 which is managed and supervised by the Florence School of Regulation