REGULATION AND LIBERALIZATION OF THE EUROPEAN ELECTRICITY MARKET – A GERMAN VIEW

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As of late, "liberalization" and "regulation" of electricity markets have devolved into expressions of largely inflated use, perhaps the safest and fastest way for those terms to become meaningless. But, properly understood, these terms remain meaningful, reflecting a fundamental change in the legal framework designed for energy markets; a change which started in the U.S. and which now, after some delay, is occurring in Europe as well. Liberalization, for purposes here, refers to the abolition of the rights of monopolies, rights which accorded European and U.S.-American energy suppliers protection against competition. Regulation, as used here, has a double meaning. First, it relates to measures taken or enacted to ensure competition in liberalized (energy) markets. In this respect, regulation constitutes a type of sector-specific competition law, adjusted to meet the economic and technical characteristics of the various energy markets. Second, regulation makes it possible to take account of the fundamental importance of secure and reliable energy supply for the public welfare. Under this view of regulation, the vagaries of energy supply are not left to the forces of supply and demand. Instead, the imposed regulation specifies specific standards—for example, with regard to so-called services of general interest and to security of supply. In so doing, these regulations limit private market development. Thus, regulation is both a result of, and a necessary accompaniment to market liberalization. It is important to bear in mind that, while some form of regulation may be needed to accompany market liberalizing measures, the particular form of regulatory administration to be installed is, at least for the moment, an open question. It may be possible to achieve the sought for regulatory objectives through several means.[1]

There is an intense academic debate concerning the extent to which administrative regulation can curb or eliminate the new economic freedoms granted private market participants as a result of market liberalization. Increasingly, market experts are warning that the merely transient and temporary regimes for establishing and ensuring undistorted competition put into place in

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1. *See* Thomas von Danwitz, *Was ist eigentlich Regulierung*, DÖV 2004, p. 977-985.

response to newly liberalized energy markets may turn into a permanent system of governmental regulation. These concerns suggest the following fundamental questions: does the bureaucratic burden of regulation sufficiently support liberties resulting from liberalization? Does it support the positively intended use of freedoms in these markets without interfering with its substance? Or does such regulation unjustly encroach on economic liberties, such that the underlying premise behind market liberalization must be called into question?

Liberalization constitutes a ground-breaking change to the whole energy sector. Consequently, this process of liberalization presents special challenges and risks, some of which may lead to serious mistakes if not handled appropriately. A perfect illustration of these risks is the electricity crisis which hit California in 2000 and 2001,[2] a crisis which—as we know by now—was caused in large part by an inadequate design of the legal framework for the liberalized Californian energy market.[3]

Although I have looked at the American regulatory structure for analogies, I do not profess to be fully conversant in American energy law. Rather, this article focuses on the problems and challenges associated with liberalization and regulation of Europe's energy markets. My remarks will fall into several broad sections.

In the first part of this article, I will explain why the European process of liberalization and regulation commenced relatively late as compared to the development in the U.S., why it was conducted in such a hesitant way, and why it has proved incapable of paving the way for a truly open internal European market for electricity, one devoid of obstacles to free trade. Put in a nutshell, the roots of these problems can be found in the respective—and divergent—economic histories of the energy markets of the different member states of the European Union (EU). Perhaps even more decisive is the fact that, in Europe, the reliable supply of energy is traditionally considered a task reserved for the state, following the tradition of the Romanic countries. This traditional allocation of state obligations explains why some member states continue to express reservations, firmly rooted in their views about state sovereignty, against the establishment of an EU-wide internal market for energy.

In the second part of the article, I will analyze the current state of liberalization and regulation which has been achieved in Europe in spite of the reservations noted above, paying particular attention to limitations placed on the emerging internal market due to climate change legislation. Climate change touches on the prescription and promotion of renewable energy sources, a topic which constitutes a main element of the U.S.-American Energy Policy Act of

2. *See* Richard D. Cudahy, *Electric Deregulation after California: Down But Not Out*, 54 ADMIN. L. REV. 333, 333-36 (2002); Timothy P. Duane, *Regulation's Rationale: Learning from the California Energy Crisis*, 19 YALE J. ON REG. 471 (2002); Michael A. Yuffee, *California's Electricity Crisis: How Best to Respond to the "Perfect Storm"*, 22 ENERGY L.J. 65 (2001); Reinhard Haas / Hans Auer, *Die kalifornische Stromkrise*, ET 2001, p. 280-287; Heike Kerber, *Versorgungsengpässe und Strompreisschwankungen in Kalifornien*, ET 2001, p. 60-66.

3. Sven Wehser, Langfristige Maßnahmen der Investitionsvorsorge im liberalisierten Strommarkt am Beispiel der USA, 2004, p. 21-24, citing further authorities [hereinafter Wehser, Investionsvorsorge].

2005[4] as well.

Looking at the process as a whole, I will differentiate between mandatory requirements under European Union law and the manner in which these requirements are being implemented by member states, particularly Germany. This distinction can be illustrated by the recently enacted German Law on the Energy Industry (Energiewirtschaftsgesetz),[5] which, as I will discuss later, contains significant flaws. At the least, it carries the danger of establishing a bureaucratic over-regulation of energy-markets and thereby creating serious obstacles to competition.

I. BACKGROUND

Historically, energy markets were considered to be areas legally exempt from competition. Due to specific technical and economic characteristics of energy markets,[6] there was a general consensus that, at the least, the transmission and retail of energy constitute natural monopolies.[7] Consequently, the introduction of competition was thought to inevitably lead to macro-economic shortcomings. The maintenance of adequate energy supplies was a matter of particular concern. To address this concern, it was common practice in the U.S.[8] and in Europe to assign the task of energy supply to vertically integrated corporations granted a monopoly with regard to a distinct area, so it could manage the entire value chain. Apart from this common fundamental decision against competition, European member states developed distinctly divergent legal and economic frameworks in their respective national energy sectors. Due to these differences, national energy markets of the Community

4. "An Act [t]o ensure jobs for our future with secure, affordable, and reliable energy." Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594.

5. Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz / Law on the Energy Industry) of 7th July 2005 (= Art. 1 des Zweiten Gesetzes zur Neuregelung des Energiewirtschaftsgesetzes), BGBl. I p. 1970-2018.

6. Electricity, if it is not converted into other forms of energy, is non-storable. For further information, *see* Georg Hermes, Staatliche Infrastrukturverantwortung, 1998, p. 16; Constanze Kreis, Deregulierung und Liberalisierung der europäischen Elektrizitätswirtschaft, 2004, p. 30 [hereinafter Kreis, Deregulierung und Liberalisierung]; Michael Lippert, Energiewirtschaftsrecht, 2002, p. 77 [hereinafter Lippert, Energiewirtschaftsrecht]; Christian Theobald, Grundlagen des deutschen Rechts der Energiewirtschaft, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 1, ¶ 20 [hereinafter Theobald, Grundlagen]. Its transmission and distribution is on the whole dependent on networks. There are alternatives to electric transmission such as distributed generation, large-scale power plants, and conservation services which are all potential substitutes for expansion on transmission capacities. These are real, but partial alternatives which cannot replace existing transmission. *See also* Harvey L. Reiter, *The Contrasting Policies of the FCC and FERC Regarding the Importance of Open Transmission Networks in Downstream Competitive Markets*, 57 FED. COMM. L.J. 243, 289-90 [hereinafter Reiter, *Contrasting Policies*].

7. Walter Schulz / Christoph Riechmann, Funktionen in der Elektrizitätsversorgung, in: Michael Bartsch / Andreas Röhling / Peter Salje / Ulrich Scholz (eds.), Stromwirtschaft – Ein Praxishandbuch, 2002, p. 3; [hereinafter Schulz / Riechmann, Elektrizitätsversorgung]; Sonja Ziesak, Regulierung oder Selbstregulierung – ein Vergleich der deutschen und US-amerikanischen Rechtsgrundlagen für die Stromdurchleitung, 2003, p. 53 [hereinafter Ziesak, Regulierung oder Selbstregulierung].

8. For further information on the historical development of U.S. energy law, *see* Jens-Peter Schneider, Liberalisierung der Stromwirtschaft durch regulative Marktorganisation, 1999, p. 291-299 [hereinafter Schneider, Liberalisierung]; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 61-74.

were highly partitioned.[9] The resultant fragmentation of national markets produced significant restrictions on the free trade of energy within the Community[10] and provided a complicated starting point for updating Community energy legislation.

The point of departure for efforts to liberalize not only European energy markets, but also the markets of other industrialized nations, and to introduce greater competition into them, was the acceptance of new technical findings and economic studies disproving the old belief that the whole electric industry was a natural monopoly. It is now acknowledged by a majority of European scholars that only the transmission and distribution of electricity are natural monopolies, whereas the generation, purchase, and sale of electricity are considered business activities of a competitive nature.[11] Because of their dependence on networks for the transport of their energy, competitors in the generation and retail sale of energy require non-discriminatory access to the accompanying networks at fair and reasonable rates.[12] For this reason, the energy network sector cannot be left to market forces alone, but must be subject to certain regulation as well.[13]

To illustrate the difficult starting position facing European nations' general intent on the abolition of electric monopolies and the establishment of an internal energy market, one must examine the differing legal frameworks in place in Germany, France, and Great Britain prior to European liberalization of the energy markets. These differences go far to explain both the hesitant and cautious approach European governments have taken toward liberalization and the peculiar compromises contained in Community and individual national energy legislation enacted to implement liberalization.

A. Germany

Even if the guarantee of a secure supply of energy was already considered a task of public interest regulation in the first phase of electrification, a national electric monopoly was never established in Germany.[14] Instead, similar to the mixed public-private energy market found in the United States, numerous power suppliers were active in German energy markets before liberalization, some privately-owned, but most either public or mixed enterprises. Yet, despite the

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9. Jürgen Grunwald, Das Energierecht der Europäischen Gemeinschaften, 2003, p. 377 [hereinafter Grunwald, Energierecht]; Thomas W. Wälde, *International Energy Law - An Introduction to Modern Concepts, Context, Policy, and Players*, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 20, ¶ 19.

10. Commission of the European Communities, *The Internal Market for Electricity*, ¶ 12, COM (1988), 238 final (May 2, 1988).

11. Schulz / Riechmann, Elektrizitätsversorgung, *supra* note 7, at 3; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 53-54. Nevertheless, the idea of competition in the energy sector is not without controversy. For example, the California energy crisis of 2000 and 2001 slowed down efforts of liberalization in liberalized markets. *See also* Wehser, Investionsvorsorge, *supra* note 3, at 32-33.

12. GERT BRUNEKREEFT, REGULATION AND COMPETITION POLICY IN THE ELECTRICITY MARKET 33 (2003) [hereinafter Brunekreeft, Regulation and Competition Policy].

13. Kreis, Deregulierung und Liberalisierung, *supra* note 6, at 61; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 53-54.

14. *See* Wolfgang Löwer, Energieversorgung zwischen Staat, Gemeinde und Wirtschaft, 1989; Johann-Christian Pielow, Grundstrukturen öffentlicher Versorgung, 2001, p. 566-585 [hereinafter Pielow, Grundstrukturen]; Theobald, Grundlagen, *supra* note 6, § 1, ¶ 46-71.

number of suppliers, there was no competitive energy market in Germany. Instead, single suppliers concluded exclusive franchise contracts *(*ausschließliche Konzessionsverträge*)* covering supply areas within their communities, much like the exclusive franchise territories operated by vertically integrated utilities historically operating in the United States. Moreover, these large, single suppliers executed contracts with other suppliers explicitly excluding competition.[15]

The German Law on the Energy Industry (Energiewirtschaftsgesetz) was enacted at the same time as its U.S.-American counterpart, the Federal Power Act, in 1935. It took account of historically evolved mixed structures between private and public suppliers. Still, in return for the exemption from competition afforded by the franchise contracts, German utility law subjected all suppliers to specific duties designed to safeguard the public interest, including, notably, a general duty to guarantee access and supply. The law also limited the rates that could be assessed end users to a level no higher than reasonably needed by the supplier to perform.[16] To ensure that the government maintained adequate oversight, public authorities were granted extensive powers to regulate investment, market access, tariffs, and terms of business. Responsible for the control of the power supply industry were supervisory authorities of the German Federal States (Energieaufsichtsbehörden der Bundesländer), the Secretary of Commerce, and the Federal Cartel Office.[17]

Ultimately, these legal foundations led to the development of a three-tier structure within the German energy market,[18] which in essence still applies today, even after the most recent liberalization measures described below.[19] Directing this system, there were and still are the so-called transmission system operators. They operate super grids needed for the long-range transport of energy and the largest part of facilities for the generation of energy. Because these system operators are vertically integrated, they are active across different levels of the value chain of the grid-bound electricity market. Some of the firms have their own areas of supply and cater to end-consumers as well. At the onset of liberalization, there were nine transmission system operators actively engaged in Germany's electricity market.[20] Since then, their number has been reduced to four due to mergers and takeovers by foreign suppliers. The four companies presently in the top tier are EnBW Energie Baden-Württemberg AG, E.ON AG, RWE AG, and Vattenfall Europe AG.[21] These companies are not state-owned,

15. For further information on the organization of the German energy market prior to liberalization, *see* Schneider, Liberalisierung, *supra* note 8, at 75-112; Norbert Eickhoff, Die Ordnung der deutschen Energiewirtschaft, 1988; Helmut Gröner, Die Ordnung der deutschen Elektrizitätswirtschaft, 1975 [hereinafter Gröner, Elektrizitätswirtschaft]; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 161-166.

16. *See* Schneider, Liberalisierung, *supra* note 8, at 89-103.

17. *See* Hans-Wilhelm Schiffer, Energiemarkt Deutschland, 9th edition 2005, p. 188-189 (information on regulation prior to liberalization) [hereinafter Schiffer, Energiemarkt Deutschland].

18. *See Gröner*, Elektrizitätswirtschaft, *supra* note 15, at 191-198.

19. *See* Schiffer, Energiemarkt Deutschland, *supra* note 17, at 176-180.

20. *See* Kreis, Deregulierung und Liberalisierung, *supra* note 6, at 39-40.

21. *See* Schiffer, Energiemarkt Deutschland, *supra* note 17, at 176. For further information on the effects of the liberalization on the German energy market, *see* Kreis, Deregulierung und Liberalisierung, *supra* note 6, at 48-55; Franz-Jürgen Säcker / Vera Boesche, *Vertikale Fusionen im Energiesektor gefährden wirksamen Wettbewerb*, BetriebsBerater 2001, p. 2329-2337; Walter Schulz / Christoph Riechmann, Unternehmens- und

but have mixed capital participations or are mainly private enterprises. It is noteworthy that RWE AG relies on a one-third participation of municipal governments.[22] The Free State of Bavaria holds a 2.5% participation of E.ON, which attracted attention in its recent quest for the Spanish Endesa.[23] The French state owned enterprise Electricité de France owns about 45% of EnBW AG; Swedish Vattenfall AB, also state-owned, owns 89% of Vattenfall Europe AG.[24]

The second tier of the German system of energy supply is made up of a group of approximately 60-70 regional suppliers that transmit energy they have produced themselves in local power plants or were fed by transmission system operators in the first level. Firms in the second tier furnish energy to local suppliers or directly to end-consumers. They are also responsible for the regional distribution of certain medium-voltage power grids.

The third and final tier of the German system consists of approximately 850 energy suppliers who primarily transmit energy to end-consumers. Generally, these companies do not produce electricity. Rather, they receive the bulk of their electricity from companies in the first and second tiers. In second and third tier companies, the participation of public, especially local, authorities plays an important role.[25] Either they operate their own companies or they cooperate with private investors.[26] Commercially acting public authorities do not only operate at cost but are interested in realizing adequate profits.[27]

Given the discrete functions performed by many of the industry's participants under this structure as well as the number of entities performing these functions, conditions were favorable for liberalizing Germany's energy sector. That there was not a single nationwide utility, but a variety of different providers who could assume the role of potential competitors, made the transition easier, at least in theory, than in countries with one or only a few energy monopolies. Moreover, unlike in other European nations, energy supply was widely not considered to be among the tasks that only the state itself should

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Marktstrukturen in der Stromerzeugung, in: Michael Bartsch / Andreas Röhling / Peter Salje / Ulrich Scholz (eds.), Stromwirtschaft, 2002, p. 34-50.

22. *See* Schiffer, Energiemarkt Deutschland, *supra* note 17, at 182.

23. Frankfurter Allgemeine Zeitung (F.A.Z.), February 23, 2006, p. 9; s*ee also* chapter A.IV of this article.

24. *See* Harry Roels, *Die Modernisierung der deutschen Energiewirtschaft vor dem Hintergrund internationaler Verflechtungen*, ET 2006, p. 20-23 (information on the consequences of foreign participations for the German energy market).

25. Gabriele Britz, Rechtliche Rahmenbedingungen kommunalwirtschaftlichen Handelns in der Energieversorgung, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 4, ¶ 1-9 [hereinafter Britz, Rechtliche Rahmenbedingungen].

26. Leonhard Müller, Handbuch der Elektrizitätswirtschaft, 2nd edition 2001, p. 35-36 [hereinafter Müller: Elektrizitätswirtschaft]; *see also* Britz, Rechtliche Rahmenbedingungen, *supra* note 25, § 4, ¶ 3-9; Wolfgang Löwer, *Die Stellung der Kommunen im liberalisierten Strommarkt*, NWVBl. 2000, p. 241-245.

27. Müller, Elektrizitätswirtschaft, *supra* note 26, at 35-36; *see also* Ulrich Hösch, *Öffentlicher Zweck und wirtschaftliche Betätigung von Kommunen*, DÖV 2000, p. 393-406 (information on commercial activities of local authorities); Gabriele Britz, *Funktionen und Funktionsweise öffentlicher Unternehmen im Wandel: Entwicklungen im Recht der kommunalen Wirtschaftsunternehmen*, NVwZ 2001, p. 380-387; Olaf Schaefer, Energiewirtschaftliche Betätigung der Kommunen, 1999.

undertake, whether directly or exclusively.[28] Under the prevailing German view, it was the state's obligation to ensure a secure and adequate energy supply. However, the state was under no obligation to supply the energy itself.[29]

To understand the importance of ensuring energy supply adequacy, it is necessary to note the present situation regarding the diversity of Germany's primary energy resources. In 2004 nuclear power accounted for 27.5% of Germany's total electricity production; lignite for 26.1%; hard coal for 22.8%; natural gas for 10.2%; oil for 1.6%; hydropower for 4.5%; and wind power for 4.1%.[30] Moreover, neither Germany nor the other members of the European Union as a whole have sufficient resources to cover their respective domestic demands for energy.[31] For example, in 2004, Germany imported approximately 61% of the primary energy needed to support its energy demands.[32] The quota differs considerably with regard to the various energy sources. Whereas, for instance, in 2004 Germany imported minimal amounts of lignite (0.1% of its annual demand) and no renewable energy sources, it had to import 97% of its demand for crude oil, 81% of its demand for natural gas and 60% of its demand for hard coal.[33] Germany's and the EU's dependence on energy imports, already substantial, is increasing considerably as domestic energy needs continue to rise. According to the European Commission's forecast, the European Union is expected to face an energy dependency level of 70% in 2030, compared to 50% today.[34]

Despite this dependence on imports of primary energy, Germany exports more electricity than it imports. In 2004, for example, Germany imported 800 million € of electricity, but exported 1062 million €.[35]

B. France

The legislative situation in France was fundamentally different from that in Germany. In France, the supply of electricity was nationalized in 1946. Ever since, the generation, transmission, and import and export of electricity have

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28. Reinhard Ruge, Die Gewährleistungsverantwortung des Staates und der Regulatory State, 2004, p. 206-207 [hereinafter Ruge, Gewährleistungsverantwortung]; Schneider, Liberalisierung, *supra* note 8, at 47.

29. The state had a guarantee obligation, but no fulfillment obligation. *See also* Ruge, Gewährleistungsverantwortung, *supra* note 28, at 206.

30. Schiffer, Energiemarkt Deutschland, *supra* note 17, at 213; less important primary energy sources are: bio mass, waste, and photovoltaic. *See also Green Paper Towards a European Strategy for the Security of Energy Supply*, at 18, COM (2000) 769 final (Nov. 29, 2000) (information on the energy sources used by European Member States).

31. COMMISSION'S REPORT ON THE GREEN PAPER ON ENERGY – FOUR YEARS OF EUROPEAN INITIATIVES 1 (Dec. 15, 2004), http://ec.europa.eu/comm/energy_transport/doc/2005_green_paper_report_en.pdf.

32. Schiffer, Energiemarkt Deutschland, *supra* note 17, at 30.

33. *Id.* at 30. Nuclear energy is a particular case. Although Germany does not have its own resources of uranium, it has reserves for several years. The 2004 imported oil originates predominantly in Russia, Norway, Great Britain, and the countries of the Middle East. The most important exporting countries of natural gas are Russia, Norway, and the Netherlands, for hard coal South Africa and Poland.

34. *Green Paper Towards a European Strategy for the Security of Energy Supply*, at 18, COM (2000) 769 final (Nov. 29, 2000).

35. *Statistical Yearbook 2005 for the Federal Republic of Germany*, at 470 (2005) (Data for 2002: import: 937 million €, export: 623 million €; 2003: import: 997 million €, export: 951 million €).

been in the hands of a single French state-owned enterprise, Electricité de France (EdF).[36]

Even more important, except for the production of electricity, these activities were regarded as a public service obligation of the state (service public). In consequence, they fell under a specific legal regime.[37] EdF was obliged to ensure reliable energy supply nation-wide. Additional obligations, subsumed under the rubric of public service, included a duty to ensure access and supply as well as the obligation to give equal treatment to all electricity buyers, particularly with regard to prices.[38]

To the extent such duties appear similar to those imposed on German transmission system operators under the former German Law on the Energy Industry, the concept of the French public service obligation cannot be compared to the German system of energy supply pre-liberalization. Even if the German concept of services of general interests implied that taking care of a specific task was not only in the individual or societal interest but in the public interest as well, it did not carry any further consequences. Notably, German law did not require a particular institution to manage energy supply. Thus, the German concept of services of general interest never exerted a significant influence on dogmatic structures of German administrative law.[39]

The situation in France is nearly the opposite: the French concept of public service constitutes one of the most important core elements of French administrative law.[40] But it is not only regarded as a legal concept for specific tasks which need to be carried out by the state; it also embodies certain political convictions and general values. This explains why the structural elements of the public service obligation are constitutionally guaranteed.[41] Simply put, the French concept of a public service obligation has become an element of French identity, one often combined with a firm conviction that tasks attributed to the service of the public must not be left to the market and to considerations of mere profitability.[42] The French opposition to the liberalization of European energy markets can be explained by French anxieties regarding a potential significant loss of social cohesion and identity in an important field of daily life. Protectionist considerations may have played a minor role as well. A desire to protect the traditional French concept of the public service against the prospect of European liberalization formed one of the reasons which led to the rejection

36. *See* Pielow, Grundstrukturen, *supra* note 14, at 170-191.

37. Johann-Christian Pielow, Service public und die Liberalisierung des französischen Energiemarktes, in: Jürgen F. Baur (ed.), Gegenwärtige und zukünftige Entwicklungen in der deutschen und europäischen Energiewirtschaft, 2000, p. 75-98.

38. *See* Pielow, Grundstrukturen, *supra* note 14, at 176.

39. Thomas von Danwitz, *Dienste von allgemeinem wirtschaftlichen Interesse in der europäischen Wettbewerbsordnung*, in: Bitburger Gespräche Jahrbuch 2002/I, 2003, 73, 80-81 [hereinafter von Danwitz: *Dienste von allgemeinem wirtschaftlichen Interesse*]; Fritz Ossenbühl, *Daseinsvorsorge und Verwaltungsprivatrecht*, DÖV 1971, p. 513-524.

40. *See* Pielow, Grundstrukturen, *supra* note 14, at 121-133.

41. Concerning the constitutional character of the service public, *see* the judgement 86-207 DC of the French Conseil constitutionnel of 25th / 26th June 1986 in: Louis Favoreu / Loic Philip, Les grandes décisions du Conseil constitutionnel, 11th edition 2001, p. 653-676.

42. For a detailed presentation, *see* Heike Schweitzer, Daseinsvorsorge, Service Public, Universaldienst, Baden-Baden, 2001/2002, p. 61-73; 80-81.

of the European Constitutional Treaty in the French referendum in 2004 and the "*Non"* sentiment of the majority of French citizens.[43]

Differences between the German and French energy market can not only be noticed with regard to the general values and principles, but as well in view of the mix of primary energy resources used for the generation of electricity and the dependence on imports. Remarkable is the dominant role of nuclear power for the generation of electricity in France.[44] In 2003, nuclear power accounted for 77.8% of France's total electricity production. Renewables accounted for 11.48%, coal for 4.63%, gas for 3.64%, oil for 1.53%, and pumped storage for 0.91%.[45] France's energy import dependency in 2003 was about 50%.[46]

C. Great Britain

The United Kingdom nationalized its electricity industry with passage of the Electricity Act of 1947 and the formation of the Central Electricity Generation Board (CEGB) in 1957. But in the 1980s, under Prime Minister Margaret Thatcher, it did a dramatic about face. In contrast to France and Germany, by its Energy Acts of 1983 and 1989,[47] the U.K. had already liberalized its electricity market, opening it to third parties by privatizing the CEGB through a series of restructuring steps undertaken prior to the European Union Directives, thereby becoming the European pioneer in introducing competition into its electricity supply industry. A core element of the liberalization was, aside from the privatization of the CEGB, the establishing of the so-called Electricity Pool of England and Wales on the wholesale sector which centrally dispatched generation.[48] Moreover, post-liberalization regulation was licensed based.[49] To determine network access charges for the remaining monopoly businesses, transmission and distribution, price-cap regulation was applied.[50] The Director General of Electricity Supply (DGES), the Office of Electricity Regulation (Offer), and the responsible Secretary of State were charged with regulatory tasks after liberalization.[51] A detailed discussion of the Thatcher government reforms is beyond the scope of this article, but suffices it to note that the transformation from monopoly to competition was nearly complete in the United Kingdom before the European

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43. For further information on the reasons for the negative Referendums in France and the Netherlands, *see* Jörg Geerlings, *Der Europäische Verfassungsprozess nach den gescheiterten Referenden in Frankreich und den Niederlanden*, DVBl 2006, p. 129, 131-133; Joachim Wuermeling, *Die Tragische: Zum weiteren Schicksal der EU-Verfassung*, ZRP 2005, p. 149, 150-151.

44. *See* Grunwald, Energierecht, *supra* note 9, at 83.

45. EUROPEAN COMM'N, EUROPEAN UNION: ENERGY & TRANSPORT IN FIGURES 2005 58 (2005), *available at* http://ec.europa.eu/dgs/energy_transport/figures/pocketbook/doc/2005/etif_2005_energy_en.pdf [hereinafter European Union in Figures, Energy].

46. *Id.* at 19.

47. *See* Schneider, Liberalisierung, *supra* note 8, at 143-147; Camilla Bausch, Netznutzungsregeln im liberalisierten Strommarkt der Europäischen Union, 2004, p. 265-267 [hereinafter Bausch, Netznutzungsregeln]; Brunekreeft, Regulation and Competition Policy, *supra* note 12, at 127.

48. *See* Schneider, Liberalisierung, *supra* note 8, at 149.

49. A license is required for activities in the British electricity supply industry. *See* Brunekreeft, Regulation and Competition Policy, *supra* note 12, at 134.

50. *Id.* at 127.

51. *See* Schneider, Liberalisierung, *supra* note 8, at 148.

liberalization was undertaken. Therefore, there was no relevant British resistance against similar European legislation.

Due to large coal reserves and resources of oil and gas in the North Sea, the United Kingdom is, as the only European member state aside from Denmark, largely self sufficient in energy.[52] The most important primary energy sources used for electricity generation in 2003 were gas, which accounted for 37.81% of the United Kingdom's total electricity production, coal (34.68%), and nuclear (22.25%).[53]

D. Evaluation

As the three foregoing national examples demonstrate, national legislation in the member states differed significantly before the European Commission started work on its proposals for liberalization and harmonization. To recap, the three national examples spanned the spectrum: from a fully nationalized, centralized industry in France; to a structure of regional, various monopolies in Germany; to a system of competition in the United Kingdom. Understandably, these marked differences made it extremely difficult to find common positions for creating an internal EU electricity market. Apart from these differences, there were also considerable differences among EU members in their political and social attitudes on the role of the state in supplying energy. These differences too presented serious obstacles to formation of a European internal market for energy. Moreover, the traditional model of energy supply—characterized by monopoly suppliers—had proven to be very successful. The guarantee of security of supply, such as in Germany or France, satisfied high standards in comparison to international norms. Furthermore, monopoly utilities, even regulated ones, have generally been very profitable. If they were owned by the state—like French EdF—they could be used as highly efficient tools in support of an active energy and economic policy.[54] For these reasons, member states were far from enthusiastic about the prospect of liberalization.

The initial European measures to liberalize markets and establish an internal market for electricity represent the outcome of contentious arguments between member states and clearly show areas of compromise intended to reconcile conflicting national points of view. Many argue that the *sine qua non* of the EU's ability to forge any deal at all was its preparedness to accept large portions of the French notion of public service. Under the deal struck, member states can continue to determine services of general public interest and to impose duties on their energy suppliers to carry out these services. Any other further attempt to liberalize would have failed to break resistance by Romanic countries.[55]

Despite its efforts, the EU's liberalization legislation has not put an end to protectionist state actions, nor has it created widely shared views on free competition in the energy sector. The Spanish government's recent strong reaction to E.ON's bid to take over the large Spanish power supplier Endesa,

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52. Its import dependency (= Net Imports / (Bunkers + Gross Inland Consumption) in 2003 was -5.9%. *See* European Union in Figures, Energy, *supra* note 45, at 19.

53. *Id.* at 75. Oil accounted for 1.76%, Renewables for 2.82%, and pumped storage for 0.68%.

54. *See* Pielow, Grundstrukturen, *supra* note 14, at 178-181.

55. *See* von Danwitz, *Dienste von allgemeinem wirtschaftlichem Interesse*, supra note 39, at 78-81.

demonstrates this clearly. To block E.ON's takeover attempt, the Spanish government extended the powers of its National Energy Commission by giving the Commission a right to object to proposed takeovers where a merger or acquisition would endanger secure electricity supplies.[56] Meanwhile, the National Energy Commission has given its permission to the planned merger but has imposed strict conditions on E.ON and Endesa.[57] Similarly, the French government played a prominent role in the planned merger of its two energy supply companies, Suez and Gaz de France, which aims at impeding an announced takeover of Suez by the Italian Enel.[58] Both governments justified their actions by underscoring the vital national importance of ensuring adequate energy supplies, a task they did not wish to leave to foreign companies, particularly those companies owned, at least in part, by foreign public authorities.[59] In the case of E.ON and Endesa, the European Commission opened infringement proceedings against Spain based on the free movement of capital guaranteed by Article 56 of the EC Treaty; it reportedly is preparing a similar step against France.[60] From the vantage point of the European Commission, mergers of energy suppliers from different Member States are considered a favorable tool to accelerate the expansion of trans-European networks and the liberalization of the European energy market.[61]

II. BASICS OF EUROPEAN ENERGY LAW

The liberalization and regulation of European energy markets are dealt with in two European Union Directives. Before examining these directives in detail, it is important to summarize the development of European energy law and to assess whether the EU possesses the necessary authority to legislate in this area.

A. The Development of European Energy Law Prior to the First Electricity Directive

Liberalization of the European energy sector was not the first step in developing a European energy policy. The start of post World War II European integration included the formation of the European Coal and Steel Community (ECSC) in 1952 and the European Atomic Energy Community (EAEC / EURATOM) in 1958.[62] The energy crises of the 1970s, which highlighted Europe's heavy dependence on imported energy, especially crude oil, also called for a reorientation of energy policy; in response, crisis mechanisms and various measures concerned with energy conservation were established.[63] A landmark in common energy policy was a working document by the European

56. Frankfurter Allgemeine Zeitung (F.A.Z.), Feb. 25, 2006, p. 11.

57. F.A.Z., July 29, 2006, p. 11: The Energy Commission's competency to impose these conditions is questionable.

58. F.A.Z., Feb. 26, 2006, p. 33.

59. Free State of Bavaria owns about 2.5% of E.ON, Italy owns 30% of Enel.

60. F.A.Z., May 4, 2006, p. 13 and Mar. 4, 2006, p. 12.

61. F.A.Z., Mar. 10, 2006, p. 20.

62. *See* Grunwald, Energierecht, *supra* note 9, at 39-41.

63. P.J.G. KAPTEYN & P. VERLOREN VAN THEMAAT, INTRODUCTION TO THE LAW OF THE EUROPEAN COMMUNITY 1231-32 (3rd ed. 1998).

Commission called *The Internal Energy Market*[64] in 1988, which included a proposal for an internal market for energy. The paper described the creation of competitive markets for separate sources of energy (coal, gas, oil, nuclear, and electricity) as well as a level playing field in competition between different forms of energy (intra-fuel and inter-fuel competition). This working paper was part of the establishment of an overall internal market, a central policy focus of the European Community in the 1990s.[65] In addition to rules about the powers for the creation of the internal market, general EC competition policy (Article 81 – 89 EC) is of particular relevance for the energy sector.[66]

For the first time, the Treaty of Maastricht, signed on July 2, 1992, by the European Council and entered into force on November 1, 1993, identified spheres of energy sector operations as concerns of the European Community,[67] but the treaty did not contain an explicit legal basis for specific legislation in the field of energy. Even the most recent European treaties, the Treaties of Amsterdam, signed on October 2, 1997, and entered into force on May 5, 1999, and Nice, signed on December 11, 2002, and entered into force on March, 1 2003, did not change this.[68]

Finally, in year 2004 a consensus was reached by the member states in the Constitutional Treaty for the European Union, which, for the first time, contains an unambiguous legal basis for the establishment of a European energy policy. But, because of the negative votes in France and the Netherlands, the Constitutional Treaty has not yet entered into force.[69] As currently written, Art. I-14 (2) i of the Constitutional Treaty splits authority to establish energy policy between member states and the European Union. Objectives which the Union can pursue under its authority are laid out in Art. III-256 of the Constitutional Treaty. For example, the Union is given power to ensure the functioning of the internal energy market and security of energy supply in the Union and to promote energy efficiency and energy conservation as well as the development of new and renewable forms of energy. Member states maintain the right to determine conditions for using their energy resources, plus the right to choose between different energy sources. Additionally, member states have the authority to establish the general structure of the energy supply industry within their borders.[70] These powers, however, are qualified under the Constitutional Treaty by the authority given the Council, if acting unanimously, to adopt European legislation for pursuing its environmental policy. Such legislation can affect member states' choices between different energy sources and their general structure of energy supply.[71] European energy legislation, primarily of a fiscal nature, can have similar impacts on the powers of member states, but, like environmental legislation, it too can only be enacted unanimously.[72]

64. *Internal Energy Market*, COM (1988) 238 final (May 2, 1988).
65. *See* Grunwald, Energierecht, *supra* note 9, at 53.
66. *See* Bausch, Netznutzungsregeln, *supra* note 47, at 85-86.
67. 2002 O.J. (C 325/40) art. 3.
68. *See* Grunwald, Energierecht, *supra* note 9, at 54-55.
69. *See* Thomas Oppermann, Europarecht, 3rd ed., 2005, § 20 ¶ 39.
70. 2004 O.J. (C 310/112) art. III-256 ¶ 2.
71. 2004 O.J. (C 310/104) art. III-234 ¶ 2.
72. 2004 O.J. (C 310/112) art. III-256 ¶ 3.

B. The First Electricity Directive (96/92 EC of 19 December 1996)

The absence of express Community authority to pursue an energy policy did not prevent the European Parliament and the Council from adopting various directives concerning the energy sector on the basis of the EU's general power to legislate to foster competition in the internal market.[73] The relevant directives for electricity markets were (1) Directive 90/377/EEC of 29 June 1990, concerning a Community procedure to improve transparency of gas and electricity prices charged to industrial end-users,[74] and (2) Directive 90/547/EEC of 29 October 1990, addressing the transmission of electricity through transmission grids.[75] Whereas these directives had mainly a preparatory character, the directive on common rules for the internal market in electricity (First Electricity Directive), finally enacted in December 1996 after several years of long and bitter discussions, presented the first significant step for establishing an internal European energy market.[76] The complexities of the Directive would be worthy of independent extended treatment; but, for the purposes of this article, a summary of the Directive's fundamental rules and principles, discussed below, will suffice.

1. Partial opening of the market

It is important to note the restraint of Community legislation in regard to the speed and scope of market opening. European markets have not been opened in one fell swoop, but step by step. Initially, it was only mandatory to open national markets for the supply of distinct large industrial consumers. The directive left further liberalization to the discretion of member states, which could decide whether and which markets to open for end users, wholesale suppliers, or transmission system operators.[77] The First Electricity Directive only imposed a legal obligation that 35% of annual consumption of electricity by end users be open to competition. This goal had to be achieved by the year 2003—granting member states five years to achieve it.

2. Instruments of Regulation and by Member states' Discretion

It is common regulatory economic knowledge that the abolition of existing exclusive rights will not, per se, suffice to open energy markets.[78] Instead, the opening of competitive electricity markets requires the existence of rights for access to existing transport network systems, since a new installation of competitive networks might only be reasonable under exceptional

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73. *See* Grunwald, Energierecht, *supra* note 9, at 56-57 and Jürgen F. Baur: Elektrizitätsbinnenmarktrichtlinie und gemeinschaftsrechtliche Schranken, in: Jürgen F. Baur / Karl-Heinrich Friauf (eds.), Energierechtsreform zwischen Europarecht und kommunaler Selbstverwaltung, 1997, p. 29-37.

74. 1990 O.J. (L 185) 16.

75. 1990 O.J. (L 313) 30.

76. *See Jens-Peter Schneider*, Vorgaben des Europäischen Energierechts, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 2 ¶ 40-70 [hereinafter Schneider, Vorgaben des Europäischen Energierechts].

77. Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 160-161.

78. For more information on regulation from the economic point of view, *see* W. KIP VISCUSI, JOHN M. VERNON & JOSEPH E. HARRINGTON JR., ECONOMICS OF REGULATION AND ANTITRUST 361-62 (3rd ed. 2000).

circumstances.[79]

a. No Unbundling of Proprietary Rights

Achieving the aim of competitive markets is possible by assigning the operation of transport networks to a company active in neither the upstream market of energy production, nor the downstream market of energy transmission. In this manner, competitive distortions can be avoided. If operators of transport networks were simultaneously active as energy distributors, they could favor their own distribution branch against other distributors in regard to network access. Similarly, they could use their own networks for cross-subsidizing their own distribution department, causing competitive distortions.

As in much of the United States, energy suppliers were traditionally vertically integrated across the whole value chain in the member states of the European Union. They operated networks and were at the same time active as suppliers of energy to end-consumers. Set against this background, the establishment of a truly independent network operator could be achieved in two ways. On the one hand, vertically integrated energy suppliers could be expropriated by an act of state by transferring ownership of the networks to new legal entities. On the other hand, vertically integrated utilities could be required to transfer entire control of their networks to independent entities.[80] The expropriation of the network operators, the first route, would require a considerable restriction of fundamental property rights of private companies which are protected both by European Law and by the constitutional law of the member states.[81] The second option would also represent a substantial encroachment on the constitutional rights of private companies because, although network operators would formally keep their ownership of the networks, the legal position would be essentially worthless due to the complete loss of influence on the networks. According to the jurisprudence of the European Court of Human Rights,[82] and of the German Federal Constitutional Court[83] in Karlsruhe, such infringements on property rights are deemed de facto expropriations, only admissible in extraordinary cases and requiring the payment

79. For further information on the difficulty of duplicating transmission networks, *see* Kreis, Deregulierung und Liberalisierung, *supra* note 6, at 33; Lippert, Energiewirtschaftsrecht, *supra* note 6, at 490-91; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 272.

80. The latter course was chosen by the California state government. *See* Ralph Baumann, *Der liberalisierte Strommarkt in Kalifornien*, Elektrizitätswirtschaft 1999, p. 14-18; Schneider, Liberalisierung, *supra* note 8, at 316-325; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 81-82, 98-102. Similar organizations were formed elsewhere in the United States as well. The FERC promoted the formation of Independent System Operators (ISOs, Order No. 888) and later Regional Transmission Organizations (RTOs, Order No. 2000), but the establishment of ISOs and RTOs was not required by law. *See* Reiter, *Contrasting Policies*, *supra* note 6, 258-261.

81. *See* Thomas von Danwitz, Eigentumsschutz in Europa und im Wirtschaftsvölkerrecht, in: Thomas von Danwitz / Otto Depenheuer / Christoph Engel (eds.), Bericht zur Lage des Eigentums, Berlin, 2002, p. 215-318 [hereinafter von Danwitz, Eigentumsschutz].

82. I.R.S. and others v. Turkey, Eur. Ct. H. R., judgment of July 20, 2004, No 26338/95, at ¶ 49; Christoph Grabenwarter, Europäische Menschenrechtskonvention, 2nd ed. 2005, § 25, ¶ 19; Katja Gelinsky, Der Schutz des Eigentums gemäß Art. 1 des Ersten Zusatzprotokolls zur Europäischen Menschenrechtskonvention, 1996, p. 57.

83. BVerfGE 83, 201, 212-213; *see also* BVerfGE 100, 226, 245-247; 102, 1, 16.

of adequate compensation.[84] For these reasons, and due to the considerable resistance of several member states, the directive did not prescribe ownership unbundling, but only management unbundling and separate accounting.[85] This requires vertically integrated companies (only) to separate the operation of their networks from other activities not relating to transmission and distribution. In particular, members of the management of transmission and distribution networks are not allowed to be involved in the power generation and retail sale activities of the corporation.[86]

b. Alternative for access to networks

Due to the traditional classification of networks as natural monopolies—and as a consequence thereof—the missing possibilities of competition in transmission and distribution, the focus of opening up the electricity market was on ensuring non-discriminatory access to networks at fair access charges.[87] According to the Directive, Member states could choose between three different alternatives for organizing access to operating systems:

First - a negotiated access to the system, in which electricity producers and suppliers authorized by Member states and eligible[88] customers conclude supply contracts on the basis of voluntary commercial agreements. The characteristic feature of this approach is that network-access charges are not regulated *ex ante*, but are only subject to *ex post* controls by the antitrust authorities.[89]

Second - a regulated system of access procedure in which a right of access on the basis of published tariffs for using transmission and distribution systems is given to eligible customers, and which implies *ex ante* regulation of network-access charges; and

Third - a single buyer procedure in which Member states designate a legal entity to be a single buyer within the territory covered by the system operator. A single buyer is any legal person who, within the system where he is established, is responsible for the unified management of the transmission system and/or centralized electricity purchasing and selling.[90]

c. Margins of Discretion by Member states

The diversity of alternatives covering access to networks highlights very clearly that the First Electricity Directive as a whole is the result of many compromises. In particular, the single buyer procedure is a concession to

84. *See* Hans D Jarass, in: Hans D. Jarass / Bodo Pieroth (eds.), Grundgesetz, Kommentar, 8th ed. 2006, Art. 14, ¶ 46-47. Also, according to the jurisdiction of the European Court of Human Rights, expropriations without compensation are illegal. *See* Lithgow v. United Kingdom, 329 Eur. Ct. H.R. 120 (1986); James v. United Kingdom, 123 Eur. Ct. H.R. 54 (1986); von Danwitz, Eigentumsschutz, *supra* note 81, at 215, 256.

85. *See* 1997 O.J. (L 27/20), art. 7 ¶ 6 and art. 13 – 15.

86. *Id.*

87. *See* Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 154.

88. Eligible customers are free to choose a supplier. *See* BRUNEKREEFT, REGULATION AND COMPETITION POLICY, *supra* note 12, at 232.

89. *Id.* at 231.

90. For the definition of the "single buyer," *see* Directive 96/92/EC art. 2. *See also* Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 156-58 and Schneider, Vorgaben des Europäischen Energierechts, *supra* note 76, § 2 ¶ 59.

member states, such as France, with national state monopolies.[91] But apart from this, the Directive leaves considerable discretion to member states, e.g., in regard to the admission of energy producing facilities or the speed of market opening. The latter aspect of market liberalization naturally bears considerable risks for establishing an internal market. It is beyond doubt that companies protected against competition in their national energy markets enjoy several substantial competitive advantages in markets of other member states which have progressed further in their liberalization efforts,[92] for example by using cross-subsidies.[93]

3. Energy supply as a public task

Even greater discretion is left to member states regarding the definition of energy supply as a service affecting the public interest. This is a particularly important concession of the Directive to member states which traditionally regarded the supply of energy as a public service in the sense of the French concept. Under the Directive, energy suppliers can be obliged to provide services of general economic interest.[94] These obligations can contain requirements that suppliers meet standards for the security, regularity, quality, and price of supply, as well as comply with environmental regulations. In return, these companies are given special or exclusive rights which protect them against competition.

C. The Second Electricity Directive for Liberalization and Regulation of European Energy Markets

As noted, the First Electricity Directive only initiated the process of liberalization. It fell far short of completing it. Further progress for a comprehensive and complete liberalization of an internal market for energy has been made through the enactment of the second Directive concerning common rules for the internal market in electricity (Second Electricity Directive),[95] in force since 2003. This applies in particular to market opening: after July 1, 2007, all customers must have the option to choose their electricity supplier freely. This required market opening in all member states was intended to end distortions of competition caused by different standards of market opening among the EU member countries.[96]

Even if this Directive does not mark the end of existing national monopolies in some member states, it would be wrong to regard the Second

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91. *See* Schneider, Vorgaben des Europäischen Energierechts, *supra* note 76, § 2 ¶ 59.

92. *See* Helmut Lecheler / Jörg Gundel, *Vollendung des Energie-Binnenmarktes*, EuZW 2003, p. 621, 624 (citing further authorities in fn 51) [hereinafter Lecheler / Gundel, *Vollendung des Energiemarktes*]; concerning the strategy for operating abroad of the EdF *see* Georg Albrechtskirchinger, *Wettbewerbssituation auf dem französischen Energiemarkt*, EuZW 2001, p. 164. *See generally* about the only hesitant liberalization in France: Johann-Christian Pielow, *Reform der französischen Energiewirtschaft*, RIW 2001, p. 351-57.

93. *See* the *Second benchmarking report on the implementation of the internal electricity and gas market*, at 3, 4, SEK (2002) 1038 (October 1, 2002).

94. Directive 96/92/EC, art. 2.

95. Directive 2003/54/EC, 2003 O.J. (L 176/37) 37 (Directive of June 26, 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC).

96. *See* Lecheler / Gundel, *Vollendung des Energiebinnenmarktes*, *supra* note 92, at 624.

Electricity Directive as a mere facilitator of liberalization. On the contrary, the Second Directive has made a significant contribution to energy market regulation. The Directive offers the basis for a wide range of possibly significant measures to ensure the functioning of competitive markets. The Second Electricity Directive also points out and reinforces the nature of energy supply as a service affected with a public interest more clearly than its predecessor, thereby highlighting the tension between the goals of achieving competition and maintaining the public interest in a secure and adequate supply of electricity. Underlying motives for this change in tone can be found in recent developments and events in the American electricity market, to which I have already referred.

1. Consumer Protection and Security of Supply as Fundamental Objectives of the Second Electricity Directive

The Second Directive does not only confirm the right of member states to place public interest obligations on electricity companies. It also increases the number of possible obligations, particularly with reference to considerations of energy efficiency and climate protection.[97] At the same time, there are more possibilities for protecting energy suppliers from competition. Further, the Second Electricity Directive contains an obligation for member states to ensure that all private consumers and small-scale businesses are adequately supplied with electricity.[98] Community law confers upon these end-users a right to be supplied with electricity at a specified quality at reasonable and transparent prices. This guarantee of a minimum standard of energy supply as a service of general economic interest is new in the EU's common electricity policy.[99]

The new Directive also pays special consideration to the aspect of security of supply. As provided for in Article 4, member states have to ensure the monitoring of security of supply issues. The member states or regulatory authorities shall monitor the supply/demand balance on national markets, the level of expected future demand and expected additional capacity, and the quality and level of maintenance of the networks. They must also monitor measures to cover peak demand and to deal with shortfalls of one or more suppliers. Once collected, the monitoring results shall be reported to the European Commission together with measures in this field. Finally, member states may require transmission system operators to comply with minimum standards for the maintenance and development of transmission systems.[100]

2. Further development of regulatory instruments

Compared to the First Electricity Directive, the Second Electricity Directive advances and tightens regulatory instruments for achieving competition in liberalized energy markets. This can be illustrated by the rules on the unbundling of vertically integrated energy suppliers. Whereas the First

97. Directive 2003/54/EC, art. 3 ¶ 2.

98. *Id.* at art 3 ¶ 3.

99. Stephanie Neveling, Europäisches Energierecht, in: Wolfgang Danner / Christian Theobald, (eds.), Energierecht , I a, para 251-52 [hereinafter Neveling, Europäisches Energierecht].

100. *See* Lecheler / Gundel, *Vollendung des Energiemarktes, supra* note 92, at 625; Neveling, Europäisches Energierecht, *supra* note 99, ¶ 257-59.

Electricity Directive only prescribed management unbundling and separate accounting, the Second Electricity Directive demands actual legal unbundling. This concept requires independence of transmission and distribution system operators—in terms of their legal form, organization, and decision making processes—from other activities of vertically integrated corporations not relating to transmission or distribution.[101]

3. From negotiated to regulated access to networks

Particularly from a German perspective, it is of special importance that the new Directive substantially limits the discretion of member states relative to the manner in which network access is established. As noted above, member states can no longer choose between three different ways but have to introduce a regulated system of access procedure.

a. The German concept of "negotiated" access to networks

Germany was the only member state of the European Union to opt for the introduction of "negotiated" access to network systems under the First Electricity Directive.[102] Under the system of negotiated access, applicants had a right of access to networks, but the conditions for using networks and especially the tariffs for network access were not laid down by law or by a regulatory authority. Instead, the legislature entrusted the parties involved to reach a suitable agreement on these conditions. In practice, this did not lead to individual agreements but to agreements of two associations representing almost all transmission and distribution network operators[103] on the one side and two associations[104] which represented the interests of third parties on the other side.[105] These so-called "consensus of branches" agreements (Verbändevereinbarungen) determined the criteria for calculating prices for access to networks for the entire electricity industry.[106] The legislature recognized this practice by declaring the content of these agreements as de facto binding.[107]

The effectiveness of the German model of negotiated access remained controversial. The agreements by branches were partially regarded as well-functioning instruments of self-administration; additional involvement by the

101. Directive 2003/54/EC, art. 10, 15.

102. *See*, Ulrich Büdenbender, Verbändevereinbarungen im Energierecht, 2003 [hereinafter Büdenbender, Verbändevereinbarungen]; Christian deWyl / Joachim Müller-Kirchenbauer, Vertragliche Ausgestaltung der Netznutzung bei Strom und Gas, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 13, ¶ 63-94.

103. The two associations were "Verband der Elektrizitätswirtschaft" (Association of the Electricity Industry) and the "Verband kommunaler Unternehmen" (Association of Municipal Undertakings).

104. They include "Bundesverband deutscher Industrie" (Federal Association of the German Industry) and "Vereinigung industrieller Kraftwirtschaft" (Association of the Power Industry).

105. *See* Büdenbender, Verbändevereinbarungen, *supra* note 102, at 9.

106. *See* Siegfried Klaue, *Einige Bemerkungen zu Verbändevereinbarungen über Durchleitungsentgelte für Strom*, ZNER 1998, p. 22-25.

107. For further information on the so called "Verrechtlichung" of the agreement of branches, *see* Gunther Kühne / Christian Brodowski, Die *Reform des Energiewirtschaftsrechts nach der Novelle 2003*, NVwZ 2003, p. 767, 770-71.

state would have been redundant.[108] Nevertheless, critics of the "agreements of branches" approach doubted that the criteria established by the companies concerned effectively led to competitive prices. Most prominent among these critics was the Federal Cartel Office. In some of its decisions, it deemed challenged prices abusive even if they had been calculated in accordance with criteria set out in the branch agreements.[109] The Study Commission on Monopolies (Monopolkommission) opined that the problem of abusive prices could not be solved through "consensus of branches." In particular, it pointed out that the efficiency in book-keeping plays no decisive role when setting price margins for energy companies.[110]

b. Regulated network access

As noted above, it is no longer relevant if "negotiated" access to networks is capable of solving the competitive problems which result from the dependence of energy supply on networks. The Second Electricity Directive no longer authorizes this alternative, but requires a "regulated" access to networks. In contrast to the system of a "negotiated" access, a regulated approach requires that the conditions of network access and accompanying prices must be regulated by a regulatory authority.[111]

i. Requirements by Community Law for Regulatory Proceedings

The Second Electricity Directive leaves it to the discretion of the member states to choose a specific procedure for this regulation of the rates, terms, and conditions of network access.[112] Yet, it contains only minimum mandatory regulatory rules, such as requiring an administrative ex-ante authorization of prices or an ex-ante permission of the methods used to calculate prices. The same applies for the conditions on network access. This means that member states can choose between a wide variety of different regulatory models for

108. Matthias Schmidt-Preuß, *Selbstregulative Verantwortung oder Staatliche Steuerung*, ZNER 2002, p. 262-66.

109. *See* Federal Cartel Office, decision of 17th April 2003, B 11 – 40 100 – T 38/01, ZNER 2003, p. 263-77 – Stadtwerke Mainz.

110. *Study Commission on Monopolies*, 15th expertise 2002/2003, BT-Drs. 15/3610, ¶ 1132.

111. Concerning the regulated network access, *see* Ulrich Büdenbender, *Die Ausgestaltung des Regulierungskonzeptes für die Elektrizitäts- und Gaswirtschaft*, RdE 2004, p. 284-300; Neveling, Europäisches Energierecht, *supra* note 99, ¶ 336-345. In the United States, tariffs for electric energy transmission are not left to negotiated arrangements, but are regulated. Prior to the adoption of Order No. 888, which contained for the first time, at the federal level, an industry-wide obligation to guarantee third party acces to the transmission grid, the Federal Energy Regulatory Commission (FERC) had already pointed out that *"a negotiation process creates uncertainty and imposes on customers delay and other transaction costs that the transmitting utility members of an RTG do not incur when using the transmission for their own benefit;" see* Order No. 888, *Promoting Wholesale Competition Through Open Access Non-discrimatory Transmission Servies by Public Utilities*, 75 F.E.R.C. ¶ 61,080, 61 Fed. Reg 21,540 (1996) (quoting Southwest Regional Transmission Association, 69 F.E.R.C. ¶ 61,100, at p. 61,397 (1994). Thus, Order No. 888 requires that the rates and conditions for third party network access have to be published and authorized by the FERC; *see* Reiter, *Contrasting Policies*, *supra* note 6, at 258-59; Schneider, Liberalisierung, *supra* note 8, at 301-02; Ziesak, Regulierung oder Selbstregulierung, *supra* note 7, at 76.

112. *See* Ernst-Olav Ruhle / Heiko Heger, *Spielräume und offene Punkte bei der Regelung zu Durchleitungsentgelten in der EnWG-Novelle*, WuW 2004, p. 484, 487-94.

calculating access charges. Without doubt, it is in perfect harmony with Community law if a national regulatory authority examines and adopts as its own the method for calculation of access charges previously agreed upon by market participants under the former German "agreements of branches" system. Furthermore, it is in accordance with Community law if the regulatory authority itself determines the methods used for calculating access charges. If they so elect, member states can opt for an administrative *ex-ante* determination and authorization, which not only includes the methods used for calculating access charges, but also includes the concrete access charge tariffs of individual system operators. It is evident that regulating the methods of calculating prices is a less intrusive form of regulation than authorizing specific tariffs.

ii. Requirements by Community Law for Calculating Charges

The Second Directive's criteria for calculating tariffs are as vague as the guidelines governing regulatory procedures. Yet, determining network use and access charges is—without question—one of the fundamental aspects of regulation in the energy sector. If an access charge is based on excessive costs, it will inevitably lead to a discrimination of competitors who have no network infrastructure of their own and who must, therefore, rely on external networks. Moreover, discriminatory pricing will result in distortions of competition within a network, and, even more importantly, in distortions of competition on the downstream energy supply market. If, on the contrary, the charges for using networks fall short, there is a danger that network operators may not invest in the security and further development of their networks due to a lack of adequate funding.[113] The main regulatory conflict between competition and security of supply is illustrated particularly well by the regulation of charges for using networks.

Set against this background, it is remarkable that the Second Electricity Directive refrains from prescribing a particular concept of regulation, but rather confines its ambit to the articulation of some very general criteria.[114] For instance, the Directive only requires that charges for using networks be objective, non-discriminatory, and cost-oriented.[115] It leaves some decisive questions open, such as the question if regulating charges for using networks must be based on the costs of the efficient provision of services or if it is possible to resort to the actual costs incurred by the regulated undertaking. Equally imprecise is the attribute of proportionality that national authorities must ensure when regulating tariffs for access to networks.[116] Regulatory authorities must calculate the tariffs in a manner that "[t]hese tariffs, or methodologies, shall allow the necessary investments in the networks to be carried out in a manner allowing these investments to ensure the viability of the networks."[117]

113. Jürgen Kühling, *Eckpunkte der Entgeltregulierung in einem künftigen Energiewirtschaftsgesetz*, N & R 2004, p. 12

114. *Id.* at 12-13.

115. Directive 2003/54/EC, art. 20 ¶ 1.

116. *Id.* at art. 23 ¶ 4.

117. Directive 2003/54/EC, art. 23 ¶ 2.

4. Remaining Limitations of an Internal Market for Electricity

Before concluding this discussion of the Second Electricity Directive, it is important to focus on the central question; whether the Second Electricity Directive can really be considered an instrument for the establishment of an internal market for electricity. This question effectively must be answered in the negative in light of the broad discretion still given to member states.

a. Services of General Economic Interest

First, the fallacy that the Second Directive establishes a bona fide competitive European market for electricity is illustrated by the wide variety of obligations which member states can impose upon companies under their authority to regulate in the general economic interest. The possibility that companies can be obligated by law to guarantee a basic supply at adequate and reasonable rates is not, in itself at odds with the establishment of an internal market. Yet, the establishment of a true internal market requires that these obligations be uniform across Europe. This condition has been fulfilled in the telecommunications sector. Yet, neither the First nor the Second Electricity Directive contains a common mandatory concept for member states. Apart from the missing right of a basic supply for end-users in the Second Electricity Directive, there are no specific requirements for the type of obligations which can be imposed on companies.

Moreover, the Second Directive does not give member states any guidelines for how to ensure that companies active in energy markets will be kept financially capable of providing services of general interest. This can be ensured by direct financial compensation as well as by granting exclusive rights. The Directive, however, merely requires that these benefits must be given in a non-discriminatory and transparent way.[118]

Finally, member states can decide not to apply fundamental provisions of the Directive. This even applies to rules on network access by third parties if the implementation of the Community requirements of liberalization and regulation would obstruct the performance, in law or in fact, of the obligations imposed on electricity corporations in the general economic interest.[119] Member states can only take these measures provided that they ensure due regard to the EC-Treaty and especially to Art. 86. This means, foremost, that national deviations from the Directive must not affect the development in trade to an extent that would be contrary to the interests of the Community [120] and are necessary for fulfilling particular services of general public interest.[121] Yet, it is questionable if the latter limitations result in far-reaching limitations on national discretion. On the contrary, the case-law of the European Court of Justice (ECJ) seems to indicate the opposite, inasmuch as the ECJ only conducts a cursory review concerning the necessity of national measures, and, thereby, leaves a wide margin of discretion to member states.[122]

118. *Id.*, at art. 3 ¶ 4.

119. Directive 2003/54/EC, art. 3 ¶ 8.

120. 2002 O.J. (C 325/33) art. 86 ¶ 2; 2003 OJ (L176/37), art 3 ¶ 8.

121. 2002 O.J. (C 325/33) art. 86 ¶ 2.

122. *See* von Danwitz, *Dienste von allgemeinem wirtschaftlichem Interesse*, *supra* note 39, at 73, 85-88.

b. In Particular: Measures for the Benefit of Climate Protection

Numerous measures for the benefit of climate protection by member states illustrate that there is still no real or factual internal European market in energy without any obstacles.[123] The promotion of renewable energy sources plays a particularly important role. Under applicable German law, transport system operators are obliged to supply electricity obtained from these sources into their network systems. They must pay tariffs to producers of this kind of energy, which are significantly more expensive than prices for energy obtained from traditional, non-renewable sources like crude oil and natural gas.[124] The additional costs are effectively included in the prices assessed to end-consumers.[125] Therefore, these excessive prices for energy from renewable sources lead to a generally high level of prices for energy in Germany and a rise in cost for all factors of productions in the energy sector. Consequently, it is hard to assess the economic advantages and disadvantages of this way of promoting renewable energy sources.

Nonetheless, my purpose in this article is not to discuss if this promotion scheme—which resulted in additional costs for consumers amounting to more than 2.7 billion Euro in 2005 and to seven billion Euro in total during the last four years—makes political and economical sense. Instead, I want to highlight that the practice is fully in conformity with Community law. It has to be kept in mind that the ECJ has rightfully refrained from categorizing this scheme as a national subsidy.[126] More importantly in this context is that the ECJ could not identify any restriction of the free movement of goods resulting from this promotion scheme, despite the fact that only German producers of energy from renewable energy sources are benefiting from this scheme and this, undoubtedly, presented an infringement of inner-Community trade.[127] This judgment has been justified by the Court of Justice by pointing out that the development of renewable energy sources belongs to the main objectives of Community policy as well.[128] Even more important, the Directive enables member states to take measures for the benefit of renewable energy sources and has not led to a complete liberalization of the electricity market yet.[129]

These findings referred to above by the Court of Justice only referred to the Community framework provided by the First Electricity Directive. However, while the Second Electricity Directive demands a complete market opening, it

123. *See* Jens-Peter Schneider, Energieumweltrecht: Erneuerbare Energien, Kraft-Wärme-Kopplung, Energieeinsparung, in: Jens-Peter Schneider / Christian Theobald (eds.), Handbuch zum Recht der Energiewirtschaft, 2003, § 18, ¶ 28-31.

124. *Id.* at § 18, ¶ 55-60. *See also* Volker Oschmann, *Das Gesetz über den Vorrang erneuerbarer Energien*, ET 2000, p. 460-64.

125. According to information of the German Federal Government, the overall height of the salaries payable pursuant to the Law on Renewable Energies (Erneuerbare-Energien-Gesetz) was about 10.6 billion € for the period of time from April 2000 until the end of 2004. The extra costs for end-consumers resulting from these salaries vary between 6 and 7.5 billion €. *See* BT-Drs. 15/5212, p. 6-7 and the answer of the Federal Government to the question "Erneuerbare Energien in Deutschland", BT-Drs. 15/5754, p. 7-8.

126. Case C-379/98, PreussenElectra v. Schleswag A.G., 2001 E.C.J. I-2099, at ¶ 54-59).

127. *Id.* at ¶ 68 - 81.

128. *PreussenElectra*, I-2099 at ¶ 74.

129. *Id.* at ¶ 77 - 78.

still enables the member states to grant specific or exclusive rights to companies which agree to fulfill requests for services of general economic interest. If member states make increasing use of this right, there is—without any question—a danger of a renewed separation of the national markets. Thus, a legal evaluation of purely national promotion schemes must take this aspect of the Directive into account.

III. REGULATION OF THE GERMAN MARKET IN ELECTRICITY

After analyzing European legislation, it has become clear that Community law gives certain guidelines for regulating the energy markets of member states. However, it simultaneously still is granting member states wide discretion for adopting specific national regulatory concepts. Giving a precise overview on the current state of liberalization and regulation of European energy markets is not possible by limiting the focus on European legislation. Instead, it is necessary to take into account its implementation by member states. Thus, the next section of this article illustrates the way in which member states have made use of their discretion by focusing on the recent German Law on the Energy Industry which implements the Second Electricity Directive into German law. Again, given the statute's breadth and complexity, this article will confine itself to the law's basic elements.

A. Main Features of German Energy Law

When designing a legal framework for the regulation of the energy market, the German legislature (Bundestag) faced an especially difficult task, which could not be compared to the situation in other member states of the European Union. Even if liberalization was completed in Germany in 1998,[130] the legislature had to take into account that the supervision of energy suppliers was traditionally carried out by the different federal states (Bundesländer). These states were keen on safeguarding their powers during the legislative process and did eventually succeed to a certain extent: whereas a federal agency for electricity, gas, telecommunication, postal services, and railroads (Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahn) regulates major companies who are active in several federal states, the federal states retain jurisdiction to regulate smaller companies.[131] This separation of jurisdiction carries the danger of different interpretations and uneven execution of the requirements given by the German Law on the Energy Industry, thereby leading to competitive distortions. However, in the face of more than 800 different transport system operators, which are currently active in Germany, the establishment of a single regulatory authority for all operators was not a viable option. Such a central regulatory authority would have only made sense if the legislature had opted for a simple regulatory concept. Yet, the German legislature did not choose a straightforward and plain regulatory

130. For information on the implementation of the 1st electricity directive into German law, *see* Gabriele Britz, *Öffnung der Europäischen Strommärkte durch die Elektrizitätsbinnenmarktrichlinie?*, RdE 1997, p. 85-93; Ulrich Büdenbender, *Die Energieaufsicht über Energieversorgungsunternehmen nach dem neuen Energiewirtschaftsgesetz*, DVBl 1999, p. 7-19; Jens-Peter Schneider, Liberalisierung, *supra* note 8, at 441-94.

131. *See* Law on the Energy Industry § 54, at ¶ 1, 2.

concept. Although there is, as yet, little practical experience with this regime, it is likely that German companies will have to face longer regulatory procedures in the future. Only time will tell if such an intensive form of regulation is beneficial to the further development of competition.

1. Obligations in the Public Economic Interest

The new German energy law does not contain any significant amendments to the obligations imposed on energy suppliers in the general economic interest. Even before the new German energy law, these entities were under an obligation to give access to the network system and to supply energy to every household customer.[132] Yet, this duty of basic supply is only imposed on energy suppliers which furnish electricity for most of the household customers in a specified area.[133]

2. Main Instruments of Regulation for Ensuring Competition

In contrast, the legal framework for regulation of network operations was completely overhauled by the Second Directive. This point is discussed below.

a. Unbundling

Community law now requires even more stringent rules concerning the unbundling of network system operations from other activities of vertically integrated energy suppliers.[134] In this regard, there are no German statutes or regulations going beyond the rules of Community Law. Unbundling has been pressed ahead extensively and is on the verge of reaching ownership unbundling.[135]

b. Network Access and Tariffs

The clearest impact of the Second Directive's provisions is in the development of unbundled tariffs governing network access. Generally, as under the First Directive, third parties still have a general right of access to networks. Yet, the conditions on access to networks and the tariffs for network access can no longer be determined by privately achieved "agreements of branches," but are subject to an administrative and judicial review. These provisions on the regulation of tariffs for network access form the very heart of the regulation concept for the energy markets. As noted earlier, the German legislature could have adopted the agreements of branches as its regulatory model but instead opted for a scheme which goes far beyond the minimum requirements of Community law. That regulatory scheme is discussed next.

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132. *See* Law on the Energy Industry §§ 18, 36..

133. *See* Law on the Energy Industry § 36, at ¶ 2; Christian Hampel, *Von der Tarifkundenversorgung zur Grundversorgung*, ZNER 2004, p. 117, 118-19.

134. For information on the new legal position, *see* Gunter Kühne / Christian Brodowski, *Das neue Energiewirtschaftsrecht nach der Reform 2005*, NVwZ 2005, p. 849, 853-855 [hereinafter Kühne / Brodowski, *Energiewirtschaftsrecht 2005*]; Boris Scholtka, *Das neue Energiewirtschaftsgesetz 2005*, NJW 2005, p. 2421, 2423-424 [hereinafter Scholtka, Das neue Energiewirtschaftsgesetz].

135. For further information on the inadmissibility of ownership unbundling according to European and German Constitutional Law, *see* Chapter B.II.2.a. of this article.

i. Costs as Basis for the Calculation of Tariffs

From now on, the starting point for the calculation of tariffs for network access in Germany is to be based on the costs of the efficient provision of services. In this regard, the German energy law follows traditional patterns of regulation as they are contained in other regulatory regimes like telecommunication law. Therefore, only those costs can be recovered from customers which would occur in a well-organized and efficiently operating system which is structurally comparable. This includes an adequate and risk-appropriate return on the invested capital stock of the regulated company. This rate of interest, which is a decisive set value for the regulation of tariffs, must be designed in order to be attractive to investors. Even if compared to other possible investments of the international capital market, it must act as an incentive for investments in the networks of energy supply.[136] The relevant rates of interest as well as many more details of the calculation of tariffs are subject to regulation by the Federal Government. Moreover, the regulatory authority is not confined to abstract models of calculation for determining the costs of an efficient provision of services. Instead, it can use tariffs of comparable markets as a corrective following a detailed procedure contained in the same regulation by the Federal Government.

ii. Regulation by Incentives as Regulatory Model of the Future?

The German energy law contains an alternative system to the cost-oriented model of regulation, which is called regulation by incentives (Anreizregulierung), akin to the incentive-based or performance-based ratemaking used by some regulators in the United States.[137] The core of this method of regulation consists of setting an upper limit for tariffs of network access or the resulting revenue for a fixed period of time.[138] The main difference from a cost-oriented system of regulation is that regulation by incentives requires the calculation of tariffs on the basis of costs only once at the beginning of the

136. BT-Drs. 15/5268, p. 119.

137. The Energy Policy Act of 2005 directed the Federal Energy Regulatory Commission (FERC) to develop incentive-based (including performance-based) rate treatments for transmission of electric energy in interstate commerce. *See* Energy Policy Act of 2005, Pub. L. No. 109-58, § 1241, 119 Stat. 594; Press Release, FERC, Commission Moves to Implement EPAct Authority on Processing of Natural Gas Projects (Nov. 17, 2005), *available at* http://www.ferc.gov/press-room/press-releases/2005/2005-4/11-17-05-E-2.asp#skipnavsub. For more information *see* C. A. Vince, et al., *What is Happening and Where in the World of RTOs and ISOs?*, 27 ENERGY L.J. 65 (2006) [hereinafter Vince, *RTOs and ISOs*]. In 1992 already, the FERC presented a *Policy Statement on Incentive Ratemaking for Interstate Natural Gas Pipelines, Oil Pipelines, and Electric Utilities*, 61 F.E.R.C. ¶ 61,168 (1992), describing possible methods of incentive-based ratemaking. In Midwest Independent Transmission Operator, Inc., 102 FERC ¶ 61,346 (2003), the FERC encouraged Regional Transmission Organizations (RTOs) to consider incentive-based ratemaking. For further information *see* Wehser, Investitionsvorsorge, *supra* note 3, at 126, and C. L. Collins, *Transmission Expansion: Risk and Reward in an RTO World*, FORTNIGHTLY MAGAZINE – PUBLIC UTILITIES REPORT, Aug. 2002, at 46-47. *See also* Report of the Energy Division of California Public Utilities Commission of September 2000, *available at* http://www.cpuc.ca.gov/published/report/1978.htm (last visited: August 4, 2006).

138. U. Büdenbender, *Das System der Netzentgeltregulierung in der Elektrizitäts- und Gaswirtschaft*, DVBl 2006, 197, 199-200; Kühne / Brodowski, *Energiewirtschaftsrecht 2005*, *supra* note 134, at 849, 852-53; B. Scholtka, *Das neue Energiewirtschaftsgesetz*, *supra* note 134, at 2421, 2425; *see generally*: Uwe Leprich / Dierk Bauknecht, *Anreizregulierung für aktive Stromnetzbetreiber*, ET 2006, p. 32-35.

fixed regulatory period, which might last several years. If, during the course of a regulatory period, a corporation manages to lower its production costs below the level of the initial calculation of tariffs, it can keep these profits. This is the advantage, but simultaneously the danger, of this regulatory method. The incentive to lower costs, which is inherent in this system, might not only lead to its purpose of increasing efficiency, but might carry disadvantageous side effects, e.g., by potentially encouraging companies to neglect necessary investments in the maintenance and further development of their network infrastructure.[139] Therefore, regulation by incentives must go hand in hand with a regulation of the quality of the networks. Due to the lack of relevant experience in this regard, the legislature has so far abstained from using the method of regulation by incentives. Instead, there is a need for preparatory measures to be taken by the Federal Network Agency (Bundesnetzagentur) and the enactment of a regulation by the Federal Government containing the necessary details. However, the German legislature has already made it very clear that regulation by incentives will play an important role in the future.[140]

iii. Administrative Framework

The introduction of regulation by incentives is equally important for the specific design of the regulatory procedure. Regulatory authorities are legally obliged to conduct an ex-ante control of tariffs for networks until the transition from the current regulatory regime to a regulation by incentives is completed. Thus, these tariffs need authorization. In addition to this ex-ante control, the legislature requires an ex-post control of tariffs according to antitrust law standards. These will become particularly important after the transition to regulation by incentives is completed.[141]

IV. CONCLUSION

Two main factors will determine whether the regulation of energy markets proves to be a success. Foremost, a framework must be established in which competition may evolve freely. Moreover, that framework must ensure that competition will not lead to dangers for the security of energy supply. My first impression is that the German model does not satisfy these requirements sufficiently.

First, the legislature has unwisely opted for an ex-ante control of tariffs for network access, an intrusive and cumbersome instrument of regulation not required by Community law, instead of confining itself to control the methods to calculate these tariffs. Consequentially, the entrepreneurial freedom to set prices for the transport of energy is widely substituted by the administrative calculation

139. Andreas Böwing / Joachim Nissen, *Die Energierechtsnovelle – ein schlüssiges Konzept zur Kontrolle von Netznutzungsnetgelten*, ET 2004, p. 712, 717; Kühne / Brodowski, *Energiewirtschaftsrecht 2005*, *supra* note 134, at 849, 852-53.

140. For further information on the activities of the Federal Net Agency concerning the regulation of incentives, *see* Entwurf des Berichts der Bundesnetzagentur nach § 112a EnWG zur Einführung der Anreizregulierung nach § 21a EnWG, *available at*: http://www.bundesnetzagentur.de/media/archive/5858.pdf (last visited: August 4, 2006).

141. *See* Kühne / Brodowski, *Energiewirtschaftsrecht 2005*, *supra* note 134, at 849, 855-56.

of tariffs. The reason for this policy decision of the German legislature might have been that the less intrusive system of "negotiated" network access did not lead to hoped-for reductions in tariff rates for network access. Furthermore, electricity prices for industrial and household customers are on a high level in Germany compared to other European member states.[142] Yet, it seems to be a legislative overreaction to subject the tariffs for the transport of energy of all 800 network system operators to a governmental ex-ante control which might carry significant bureaucratic obstacles for competition and definitely excludes a flexible reaction of suppliers to market signals.

Furthermore, it remains questionable whether competitive conditions and the resulting pressure of cost-efficient production give sufficient incentives for investments in existing networks and their further development. Unfortunately, the German legislature paid insufficient attention to this concern, especially since it decided to strike out the principle of maintaining the gist (Nettosubstanzerhaltung) of the legislative texts in the last minute notwithstanding that this principle had been contained in all preceding legislative draft proposals.[143] Thus, maintaining the security of supply will belong to the very "hot" subjects on the agenda of tomorrow's energy policy.[144] During summer 2003, blackouts in the United Kingdom, Scandinavia, and Italy illustrated the need for action to improve the reliability of electricity supply in Europe.[145] Recently, the European Parliament and the European Council have adopted a directive concerning measures to safeguard security of electricity supply and infrastructure investment.[146] Main aspects of the Directive are the operational network security, maintaining balance between supply and demand, network investments, and the reporting of monitoring results.[147] This directive does not question the principle of competition, yet it duly takes into account that market forces by themselves might not suffice for guaranteeing reliable energy supply in Europe.[148] The European member states have to bring into force the laws, regulations and administrative provisions necessary to comply with the Directive by February 24, 2008.

Supply adequacy mechanisms play an important role in recent U. S. energy

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142. The electricity prices for industrial and household customers in Germany are higher than the EU-average. The average price per 100 kWh for households in 2004 was 12.37 € in the EU, 15.69 € in Germany, 11 € in France, and 8.37 € in the UK. For industrial customers, the average prices per 100 kWh in 2004 were 5.69 € in the EU, 7.40 € in Germany, 5 € in France, and 4.01 € in the United Kingdom. *See* European Union in Figures, Energy, *supra* note 45, at 42 (industry), 45 (households).

143. BT-Drs. 15/5736 (new), p. 3.

144. In the next two decades, necessary investments in networks and power generation in Germany will run into the billions. *See* "Investitionen im liberalisierten Energiemarkt," expertise of the energy institute of the university of Bremen, *available at* http://www.vdn-berlin.de/global/downloads/aktuelles/Kurzfassung_Investitionen_im_liberalisierten_Energiemarkt.pdf (last visited: August 4, 2006).

145. Gert Brunekreeft / Sven Twelemann, *Institutionelle Reformen zur Versorgungssicherheit – Status quo und Perspektiven der deutschen Stromwirtschaft,* ZfE 2004, p. 163-73 [hereinafter Brunekreeft / Twelemann, *Versorgungssicherheit*].

146. Directive 2005/89/EC, 2006 O.J. (L 33), 22-27. On March 8, 2006, the European Commission adopted its new Green Paper. *Commission Green Paper on A European Strategy for Sustainable, Competitive and Secure Energy*, COM (2006) 105 final (Mar. 8, 2006).

147. Directive 2005/89/EC, art. 4-7.

148. *See* Ulrich Ehricke, *Der europäische Regelungsansatz zur Versorgungssicherheit in Bezug auf Stromnetze – zum Richtlinienvorschlag für die Sicherung der Elektrizitätsversorgung*, ZNER 2004, p. 211-17.

policy as well.[149] The blackout in August 2003 in the Midwest and Northeast United States, and Ontario, Canada[150] highlighted the necessity of creating mandatory and enforceable reliability standards.[151] Consequently, one of the most important goals of the Energy Policy Act of 2005 was to improve reliability and to create incentives for investments in the energy sector.[152]

Given all these factors, it is difficult to predict the future trends in European energy markets. However, it appears likely that competitive dynamics will not be on the forefront. Energy law, rather, seems to be another example of the European choice of an administered form of competition. If this was necessary for the sake of ensuring energy supply security, we all would be happily living with this consequence. But there is little evidence that the overregulation of energy markets will effectively contribute to a high level of energy supply safety.

149. In the United States, there are several approaches to ensuring resource adequacy and reliability compensation. Examples are the Midwest ISO's energy only market and PJM Interconnection's Reliability Pricing Model. For further information, *see* Vince, *RTOS and ISOS*, *supra* note 137, at 1, 20-21 (PJM), 23–25 (MISO). In New England, a forward capacity market (FCM) will be implemented. The local installed capacity (LICAP) mechanism proposed by New England's independent power grid system operator ISO-New England two years ago was averted by the FERC; *see* Press Release, FERC, Commission Accepts Settlement Designed to Resolve Reliability Issues in New England Region (June 15, 2006), *available at* http://www.ferc.gov/press-room/press-releases/2006/2006-2/06-15-06-E-1.asp#skipnavsub. For further information on the course of the litigation at the FERC, *see* Vince, *RTOS and ISOS*, *supra* note 137, at 16–20. California is working on resource adequacy mechanisms. *See* Vince, *RTOS and ISOS*, *supra* note 137, at 21–23; CALIFORNIA PUBLIC UTILITIES COMMISSION, ENERGY DIVISION, CAPACITY MARKETS WHITE PAPER (2005), *available at* http://www.cpuc.ca.gov/word_pdf/REPORT/48884.pdf.

150. The blackout which affected an area with an estimated fifty-million people and paralyzed these states for hours was caused by the domino-like collapse of various transmission lines and the loss of more than 508 generating units at 265 power plants. For further information on the course of events on August 14, 2003, *see* Chapter 4 and 5 of the *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations of the U.S.-Canada Power System Outage Task Force*, *available at* http://www.nerc.com/~filez/blackout.html (last visited: August 4, 2006). The report contains a detailed presentation of reasons for the blackout as well. In some parts of the U.S., power was not restored for four days. Parts of Ontario suffered rolling blackouts for more than a week. *Id.* at 1. For further information on the blackout, *see* John O. Sillin, *Why We Fell into the Heart of Darkness*, FORTNIGHTLY MAGAZINE – PUBLIC UTILITIES REPORT, Sept. 2003, at 30-37; and Brunekreeft / Twelemann, *Versorgungssicherheit*, *supra* note 145, at 163-73.

151. Vince, *RTOs and ISOs*, *supra* note 137, at 53.

152. On August 8, 2005, the Electricity Modernization Act (Title XII of the Energy Policy Act of 2005) was signed into law. It proposes the creation of an Electric Reliability Organization (ERO). Energy Policy Act of 2005, Pub. L. No. 109-58, tit. XII, 119 Stat. 594. For further information on the implementation, *see* FERC, PRINCIPLES FOR AN ELECTRIC RELIABILITY ORGANIZATION THAT CAN FUNCTION ON AN INTERNATIONAL BASIS (2005), and Order No. 672, *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, 114 FERC ¶ 61,104 (Feb. 3, 2006). *See also* Vince, *RTOS and ISOS*, *supra* note 137, at 53-54.