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Competition Rules or Sector-Specific Regulation for the Liberalisation of the European Electricity Markets? With Reference to the English, Greek and German Third-Party Access Regimes

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Are sector-specific rules required for the liberalisation of the electricity markets in Europe? This article provides an analysis of the reasons why sector-specific rules are important and examines how the two models of liberalisation, sector-specific regulation and competition rules, have been implemented in practice. The article examines the experience in three jurisdictions.

Almost 18 years have passed since the European Commission's initiative to begin the liberalisation process for the European electricity and gas markets and to create an internal energy market replacing the existing national and regional markets.[1] In the electricity sector some of the factors that have contributed to Member State control and the absence of competition include: the need to ensure security of supply; the economic and social

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1 This initiative was depicted in the European Commission Working Document 'The Internal Energy Market' (1988) (COM(88)238 final).

importance of electricity; and the natural monopoly features of the infrastructure necessary for its transmission and distribution. However, technology advances and globalisation have led the European Community to start a liberalisation process to take advantage of the efficiencies produced by the increased competition. The liberalisation of the electricity market in the European Union forms part of a greater global process of liberalisation and deregulation and its basic reasons are political, economic and legal. From a political point of view, liberalisation aims at achieving more efficiency, creating a more competitive market, ensuring security of supply, attracting new investors and sometimes also at divesting the state of overregulated and often heavily indebted public undertakings. From an economic perspective, as a result of the European Union's important role in global trade, the European electricity industries need to improve their competitiveness in order to survive in world markets competing against other electricity companies operating on the basis of different economic factors.[2] In this sense, the establishment of an internal energy market is considered to be the basic prerequisite to realise such competitiveness.[3] In the legal field, the European Commission's action to complete the internal energy market is justified by the EC Treaty provisions for the creation of an internal market in all areas of the economy, including the sector in question.[4]

The European Commission's initiative was followed by legislation on the liberalisation of the energy markets, which was implemented by the Member States and obliged them to open up their energy markets within a specific time limit. In 1990, the Council of Ministers adopted a Directive on electricity transit[5] and another Directive on price transparency for gas and electricity prices.[6] As a next step, the European Parliament and the Council adopted Directive 96/92/EC concerning common rules for the internal market in electricity,[7] which was repealed by Directive 2003/54/EC[8] in order

2 In countries such as the United States, Australia and New Zealand, energy markets have already been opened up to more competition. The author recognises that there is as yet no competition among electricity companies at a global level.

3 European Commission White Paper, 'An Energy Policy for the European Union' (1995) (COM(95)682 final).

4 A M Klom, 'Effects of Deregulation Policies on Electricity Competition in the EU' (1997) 15 J Energy Nat Resources L 1, 3-4.

5 Council Directive 90/547/EEC of 29 October 1990 on electricity transit through transmission grids OJ 1990 L 313/30; regarding the gas sector, see Directive 91/296/EEC of 31 May 1991 on natural gas transit through grids OJ 1991 L 147/37.

6 Council Directive 90/377/EEC of 29 June 1990 on the transparency of gas and electricity prices charged to industrial end-users OJ 1990 L 185/16.

7 Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity OJ 1997 L 27/20.

significantly to extend and accelerate the liberalisation process (referred to as 'the Acceleration Directive'). The Directives abolished exclusive rights, required unbundling of network activities from generation and supply activities and provided for a gradual opening-up of the market (at the beginning for certain and gradually for all customers), for a liberal procedure for authorising new generation capacities and for better third-party access to the network by implementing over time a system of regulated third-party access to transmission and distribution systems. They were accompanied by regulations and guidelines with regard to cross-border tariffs and the allocation of available interconnection capacities[9] in order to ensure effective access to transmission systems for the purpose of cross-border transactions and to better integrate the new Member States and neighbouring regions into a wider European energy market.[10]

However, some of the main goals of liberalisation as regards the removal of restrictions on competition, such as the free choice and switch of supplier, free market entry and transparent and non-discriminatory access to the network are far from being achieved, even though almost seven years have passed since implementation of the Directives by Member States. Market concentration owing to the remaining dominance of the incumbents, vertical foreclosure because of existing long-term contracts, lack of market

8 Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC OJ 2003 L 176/37.

9 Such as Regulation 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges in electricity OJ 2003 L 176/1; Decision 1229/2003 of the European Parliament and of the Council of 26 June 2003 laying down a series of guidelines for trans-European energy networks and repealing Decision 1254/96/EC OJ 2003 L 176/11.

10 For an overview of the liberalisation of the electricity markets under EC law, see, *inter alia*, P D Cameron, *Competition in Energy Markets: Law and Regulation in the European Union* (OUP, Oxford, 2002); *idem* (ed), *Legal Aspects of EU Energy Regulation: Implementing the New Directives on Electricity and Gas across Europe* (OUP, Oxford, 2005); *idem*, 'The Internal Market in Energy: Harnessing the New Regulatory Regime' (2005) 30 ELRev 631; D Geradin, 'L'ouverture à la concurrence des entreprises de réseau – analyse des principaux enjeux du processus de libéralisation' (1999) 35 Cahiers de droit européen 13; *idem* (ed), *The Liberalisation of State Monopolies in the European Union and Beyond* (Kluwer Law International, The Hague, 2000); *idem* (ed), *The Liberalisation of Electricity and Natural Gas in the European Union* (Kluwer Law International, The Hague, 2001); M T Marinos, 'The Acceleration Directive 2003/54/EC on the Full Liberalisation of the National Electricity Markets' (2004) 1 Energy & Law 17 (in Greek); M Papantoni, *Energy Law* (Legal Library, Athens, 2003) (in Greek); E Pfrang, *Towards Liberalisation of the European Electricity Markets* (Schriften zum Staats- und Völkerrecht 80, Peter Lang, Frankfurt am Main, 1999); M de Rijke and I Schong, 'Harmonising the Liberalisation of the Natural Gas and Electricity Markets: Is a Single European Energy Market within Reach?' (2001) 12 URL 3.

integration and transparency and an increase in prices for electricity in many European electricity markets are some of the problems that the European Commission is still tackling.[11] This might give rise to discussions concerning a probable regulatory failure. In this respect, it would be interesting to examine whether regulation represents the best way to liberalise the electricity markets. It has been argued that liberalisation in this sector could be achieved through the direct application of domestic and EC competition rules (generally considered as efficient means to liberalisation in other economic sectors) rather than sector-specific rules. Inevitably, this brings to mind the German experiment as regards the option for the model of negotiated third-party access provided for by the first Electricity Directive, which led to the absence of sector-specific rules and the full application of competition law to the most fundamental issue of liberalisation.

The aim of this article is to discuss the choice between sector-specific versus general competition rules for the liberalisation of European electricity markets. Its overall structure takes the form of four parts, including this introductory one. The second part analyses the reasons why and to what extent sector-specific rules are required for the liberalisation of the electricity markets in Europe. The third part examines how the two models of liberalisation, ie sector-specific or competition rules, have been implemented in practice regarding the issue of third-party access to the electricity network. It provides an overview of the way the relevant rules have been applied to England and Wales, Greece and Germany, showing how three countries with a completely different background in the regulation of this sector have achieved harmonisation of their domestic legislation, without, however, having so far obtained the same level of competitiveness in their markets. In particular, this chapter examines the implications of the initial adoption of the model of negotiated third-party access in Germany and makes an effort to explain the slow pace of the liberalisation of the Greek electricity market by contrast with the advanced British electricity market, despite the fact that both Member States opted for the model of regulated third-party access from the beginning of the liberalisation process. The conclusion gives a brief summary and critique of the findings.

11 European Commission, Communication from the Commission: Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report) (2007) (COM(2006)851 final), available at http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/energy/final_report.pdf; European Commission, DG Competition Report on Energy Sector Inquiry (2007) (SEC(2006)1724), available at http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/energy/#final.

Justification of sector-specific regulation in the electricity sector

Why are sector-specific rules required?

An assessment of the sector-specific rules for the liberalisation of the electricity market should begin by acknowledging that they aim at removing barriers to entry to the market and to the free choice and switch of supplier (*ex ante* regulation), whereas competition law applies to ensure that state barriers that are being removed by the Electricity Directives are not replaced by the anti-competitive behaviour of market operators (*ex post* regulation). By definition, sector-specific rules are designed to apply to this unique area taking account of its particular technical and economic characteristics and defining a narrow range of the acceptable conduct of the operators involved. By contrast with general competition law, therefore, they eliminate the discretion of the competent authorities, providing a significant degree of legal certainty and stability in the regulation of important and complicated issues, such as network access prices.[12]

At the same time, sector-specific regulation is intended to achieve a broad set of objectives, including, for instance, social or distributional priorities, and thus exceed the rather narrowly focused legalistic objectives of competition law, which consist mainly in the prohibition of agreements that prevent, restrict or distort competition and conduct that constitute an abuse of a dominant position. This may allow regulators to escape this narrow legalistic perspective and enables them to focus on broader efficiency and welfare criteria. However, there is some risk of unpredictable and discretionary interventions undermining the regulatory certainty achieved (here, the desirable certainty and stability are in the hands of regulators, who are expected to fulfil their obligations in the most effective way).[13]

Since one of the most important features of the electricity industry is the fact that the grid is a natural monopoly, the main question in the liberalisation process is on what terms the operators have access. The prime concern is that the network operator will use its network monopoly position to offer preferential terms to its own service provider thus foreclosing rivals' access and distorting competition. Although general competition rules are arguably better suited to prevent incumbents from excluding other operators from

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12 For an overview of the relevant discussion, see T Prosser, *Law and the Regulators* (Clarendon Press, Oxford, 1997), p 272 *et seq.* For an analysis from an economic point of view, see J J Laffont and J Tirole, 'Access Pricing and Competition' (1994) 38 *European Economic Review* 1673; D M Newbery, *Privatization, Restructuring, and Regulation of Network Utilities* (The MIT Press, Cambridge, Massachusetts, 1999), p 162.

13 T Van Dijk, 'General or Specific Competition Rules for Network Utilities?' (2001) 2 JNI 93, 98.

the markets where competition is freely attainable and sustainable, they cannot prevent the incumbent's exclusionary behaviour when entry barriers are high, which is the case of the natural monopoly in the electricity sector.[14]

More specifically, in case of a natural monopoly the duplication of fixed costs may render any competition inefficient. The social cost of inefficient duplication may be limited where the investment of a new entrant is short lived. However, in the electricity industry investments have long economic lives. Moreover, given that the special assets associated with electricity transport are not likely to have significant alternative uses, their costs are to a large extent sunk. In the absence of sector-specific regulation of the tariffs and the conditions concerning access to the grid, it can be expected that the incumbent will be involved in repeated negotiations with operators wishing to obtain access to the network over the price to be paid for the use of the network for a period of time. Given the large size of this price range, which may be set anywhere between the marginal cost of operating the facility in question and the total cost of an alternative ('standalone') facility,[15] it seems that disputes will be frequent. While such conflicts may eventually be resolved by the courts and competition authorities, the process usually takes time given that the assessment of any case requires the collection of a large volume of sector-specific information. If one considers that disputes over network access are likely to be repeated, it is preferable to set out in advance sector-specific rules regulating price fixing and generally the conditions as regards access to the grid.[16]

The legal uncertainty and instability created by the absence of sector-specific rules, the need for time-consuming negotiations and the subsequent risk of litigation or arbitration inevitably result in an increase in the transaction costs concerning entry to the electricity industry; thus, efficient investments in the sector are significantly discouraged.[17] Detailed behavioural

14 *Ibid*, at 100.

15 *Ibid*, at 104.

16 *Ibid*, at 100.

17 As regards the concept of transaction costs, see O E Williamson, 'The Vertical Integration of Production: Market Failure Considerations' (May 1971) 61 *American Economic Review* 112, 115; *idem*, 'Transaction-Cost Economics: The Governance of Contractual Relations' (1979) 2(2) *Journal of Law and Economics* 233, particularly at 257 about the impact of transaction costs on the regulation of natural monopoly; P L Joskow, 'The Role of Transaction Cost Economics in Antitrust and Public Utility Regulation' (1991) 7 *Journal of Law, Economics, and Organization* 51; R K J Crocker and S E Master, 'Regulation and Administered Contracts Revisited: Lessons from Transaction-Cost Economics for Public Utility Regulation' (1996) 9 *Journal of Regulatory Economics* 24-28; J A Gómez-Ibáñez, *Regulating Infrastructure – Monopoly, Contracts, and Discretion* (Harvard University Press, Cambridge, Massachusetts, 2003), p 20 *et seq.*

rules will eliminate these costs providing investors with security of expectations. In this framework, it is remarkable that the European Commission decided to make the model of regulated third-party access to the electricity network obligatory for Member States considering that this will result in lower transaction costs for third parties.[18] Indeed, the Acceleration Directive (repealing the first Electricity Directive, which provided a model of negotiated third-party access) provides that access to the network is only granted on the basis of tariffs approved by the regulatory authorities.[19,20]

To what extent are sector-specific rules necessary?

The situation is different as regards electricity prices at the supply level. If a competitive market is already established, then it may no longer be necessary to regulate the prices charged by suppliers since dissatisfied customers can switch supplier. It could be argued that consumers might also form effective purchasing coalitions so as to be able to negotiate better terms with the network operator, particularly if they represent a large total demand in electricity. For instance, they could participate in negotiations concerning long-term contracts that fix prices for investment by considering competing offers and thus might be able to drive down costs.[21]

Moreover, if a competitive market is already established it may no longer be necessary to regulate service standards, which are normally imposed on suppliers by the sector-specific rules. In this case, suppliers may be able to tailor the quality of alternative product offerings to match the preferences of different consumers efficiently. However, in case of failure to meet standards in this respect it is possible that their activities impose substantial costs on other network users creating externalities for the effective operation of the network. At the generation level as well, in the absence of sector-specific rules, generators may have no incentive to maintain quality standards endangering network security and thus impose externalities on other network users.[22]

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18 European Commission XXXI Report on Competition Policy 2001 (92), available at http://ec.europa.eu /comm/competition/ annual_reports/.

19 See Art 20 of Directive 2003/54/EC.

20 *Infra*, III.

21 Even if this may seem to be ideal, it must be taken into account that it is a difficult task that may incur substantial transaction costs and therefore be confined to larger customers. See Van Dijk, n 13 above, at 106.

22 *Ibid*, at 105.

In conclusion, one could say that, although it is not doubted that competition may ultimately be the most effective means for protection against monopoly, even in the electricity sector, sector-specific regulation is considered necessary until sufficient competition develops in the industry. Particularly at the beginning of the liberalisation process, where competition is emerging, sector-specific rules are necessary to prevent incumbents monopolising distribution networks giving an advantage to an affiliated supplier over any other. At this stage, general competition rules are not ordinarily an effective weapon for controlling the market power of a natural monopolist. If they were used, for example, to enable the creation of more companies where a natural monopoly now exists, each new smaller company would have higher unit costs than the older and larger one and, consequently, the price of the product would rise.[23] Progressively, the more competitive the market, the less necessary the regulation becomes. As experience has shown, the pricing of access to transmission and distribution networks, which is one of the most crucial elements to the development of competition in the electricity sector, requires regulatory intervention so that consumer welfare is protected. As competition increases, however, there may be a regulatory retreat from detailed prescriptive controls even over such matters.[24]

Regulated versus negotiated third-party access to the network

Access to transmission and distribution networks has been considered a key factor for the opening-up of the electricity market and the introduction of competition and the cornerstone of liberalisation. Under the regime established by the first Electricity Directive, Member States were given a choice among negotiated third-party access, regulated third-party access and the choice of a single buyer, under specific conditions.[25] In the case of negotiated third-party access, supply undertakings and eligible customers, eg customers who are free to buy electricity from the supplier of their choice,

23 S Breyer, *Regulation and Its Reform* (Harvard University Press, Cambridge, Massachusetts, 1982), p 159.

24 As regards these conclusions, see M Armstrong, S Cowan and J Vickers, *Regulatory Reform: Economic Analysis and British Experience* (The MIT Press, Cambridge, Massachusetts, 1994), p 129; R Baldwin and M Cave, *Understanding Regulation: Theory, Strategy, and Practice* (OUP, Oxford, 1999), pp 210, 222, 223; P Nicolaides, 'Enforcement of Competition Rules in Regulated Sectors: An Appraisal of the Perceived Conflict between Market Entry and Regulation in Light of the Experience of the European Union' (1998) 21(3) *World Competition* 5, 27-28.

25 Articles 16 *et seq* of Directive 96/92/EC.

either inside or outside the territory covered by the system, are able to negotiate access so as to conclude supply contracts with each other on the basis of voluntary commercial agreements. In the case of regulated third-party access, eligible customers are given a right of access on the basis of published tariffs for the use of transmission and distribution systems, which should be equivalent in terms of access to the system to the other producers.[26] The unsatisfactory results from the operation of the negotiated third-party access option incited the Community to require regulated third-party access. Under the Acceleration Directive, Member States are required to ensure that the system of third-party access that they implement is based on published tariffs, is applicable to all eligible customers and is applied objectively and without discrimination among the system users. Refusal to access by a transmission or distribution system operator is possible where there is no available capacity.[27] The Acceleration Directive also requires Member States to establish national regulatory authorities. This is strongly related to the adoption of the system of regulated third-party access and is a necessary condition for its success. The role of these authorities is underlined by the requirement that tariffs or the methodologies underlying their calculation be approved prior to their entry into force.[28]

Regulated third-party access in England and Wales and Greece

Both England and Wales[29] and Greece, from the beginning of the liberalisation process, opted for the model of regulated third-party access to transmission and distribution networks. In this framework, they also established national regulatory authorities for the energy sector, although initially they were not obliged to.

England and Wales: liberalising an already privatised market

After being subjected to several changes during the twentieth century, the electricity sector in England and Wales had already been privatised by the time of the implementation of the first Electricity Directive. In the 1980s,

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26 For an analysis of the third-party access options, see D S Nikas, 'Third Party Access and Internal Electricity Market' in P D Dagtoglou, *The Person and the State – Liber Amicorum* (Ant N Sakkoulas, Athens, 2002), p 257 (in Greek).

27 Article 20 of Directive 2003/54/EC.

28 Article 23 of Directive 2003/54/EC. See also P Cameron, 'Completing the Internal Market in Energy: An Introduction to the New Legislation' in Cameron (ed), n 10 above, at [2.36].

29 With respect to electricity, there is no uniform regime in the United Kingdom. Scotland is in the process of replacing its regime with the one applied in England and Wales, while Northern Ireland has a separate regime applying to both gas and electricity sectors.

the Conservative Government, incited on the one hand by the failures of the existing legal framework, under which the electricity sector was fully nationalised,[30] and on the other hand by the successful privatisations of British Telecom (1984) and British Gas (1986), set out the framework for a restructured electricity supply industry in readiness for privatisation. The Electricity Act 1989[31] introduced price competition among generators and, by degrees, competition in supply among the regional electricity companies (RECs). It also established a regulatory authority, the Director General of Electricity Supply (DGES), which headed the Office of Electricity Regulation (OFFER). The Utilities Act 2000[32] was issued after the first Electricity Directive and amended the Electricity Act 1989. It provided, among others, for the Gas and Electricity Markets Authority (GEMA) to take the place of the DGES.[33] Finally, the Energy Act 2004[34] dealt with some outstanding issues arising from the Acceleration Directive but did not need to make significant changes to the existing legal framework since most of these requirements had already been anticipated.[35]

30 As regards the regime before the privatisation of the sector, see Electricity Acts 1926, 1947 and 1957.

31 www.opsi.gov.uk/ACTS/acts1989/Ukpga_19890029_en_1.htm.

32 www.opsi.gov.uk/acts/acts2000/20000027.htm.

33 GEMA operates through its office, the Office of Gas and Electricity Markets (Ofgem).

34 www.opsi.gov.uk/ACTS/acts2004/20040020.htm.

35 As to regulation of the electricity market in England and Wales, see Armstrong, Cowan and Vickers, n 24 above, at 279 *et seq*; J Bremen, 'The United Kingdom' in P D Cameron (ed), *Legal Aspects of EU Energy Regulation. Implementing the New Directives on Electricity and Gas across Europe* (OUP, Oxford, 2005), [15.01] *et seq*; E D Cross, *Electric Utility Regulation in the European Union: A Country by Country Guide* (John Wiley & Sons, Chichester, 1996), p 231 *et seq*; T Daintith and L Hancher, *La stratégie énergétique en Europe: son cadre juridique* (Office des publications officielles des Communautés européennes, Luxembourg, 1987), p 74 *et seq*; S Daw, 'Energy Law in the United Kingdom' in M M Roggenkamp, A Ronne, C Redgwell and I del Guayo (eds), *Energy Law in Europe: National, EU, and International Law and Institutions* (OUP, Oxford, 2001), [13.01] *et seq*; R Eccles and D Marks, 'Electricity' in P Freeman and R Whish (eds), *Butterworths Competition Law* (LexisNexis UK, London, Issue 58, October 2004), [1706] *et seq*; International Energy Agency, Energy Policies of IEA Countries: The United Kingdom, 2002 Review, available at www.iea.org/ Textbase/ publications/free_new_Desc.asp?PUBS_ID=1092; R Lane, 'National Approaches to Regulating Competition in the Electricity and Gas Markets: United Kingdom' in L Hancher (ed), *The European Energy Market: Reconciling Competition and Security of Supply* (Bundesanzeiger, Köln, 1995), p 49 *et seq*; C McCarthy, 'OFGEM: Characteristics and Issues of the British Electricity Market' (2001/2002) 12 ULR 170 *et seq*; A McHarg, 'Reshaping the Electricity Generation Market in England and Wales' (1999) 10 ULR 34 *et seq*; Newbery, n 12 above, at 199 *et seq*; M Papantoni, 'La libéralisation du marché de l'énergie électrique dans l'Union européenne: le cas du Royaume-Uni, de l'Allemagne, de la France et de la Grèce' (2003) 56 RHDI 181, 184 *et seq*; J P Schneider, *Liberalisierung der Stromwirtschaft durch regulative Marktorganisation: Eine vergleichende Untersuchung zur Reform des britischen,*

Under the British system of third-party access to the transmission network, the National Grid Company (NGC), which is the sole owner and operator of the national transmission system, is obliged by the terms of its transmission licence to maintain various industry codes dealing with the operation and use of the transmission system.[36] As regards the distribution network, the Distribution Network Operators (DNOs), which have monopoly licence rights over distribution within their geographical areas, are obliged to make connections between their distribution system and any premises when they are requested to do so by the owner of the premise or an authorised electricity supplier. The prices charged for electricity transmission and distribution are regulated by the regulatory authority through a price control regime, which lasts for five years and at the end of which and after detailed consultation with the industry, a new control is set by means of modifying the relevant licence condition.

This early restructuring of the electricity industry in England and Wales was not without flaws. At the outset there were too few competitors to generate effective competition. The arrangement for the wholesale trading of electricity, known as the Electricity Pool, was criticised by customers and other stakeholders as a mechanism for setting prices. Following a review in 1998, the Department of Trade and Industry introduced the New Electricity Trading Arrangements (NETA) in March 2001, which changed trading arrangements to make the market more competitive and encourage a fall in prices. Moreover, the industry went through vigorous self-restructuring with a host of takeovers. As a result, the generation market is now free and no longer dominated by one or two players with overwhelming market power. Six companies participate as important producers and suppliers (Centrica, NPower, Powergen, EdF Energy, Scottish Power and Scottish and Southern Electricity), none of which has a dominant position. Furthermore, consumers very often switch supplier while prices reflect market conditions better than under the Electricity Pool.

It is fair to say that, after the aforementioned improvements, the introduction of competition in England and Wales was eventually successful. The success of the transition from a monopoly to a liberalised market

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US-amerikanischen, europäischen und deutschen Rechts (Nomos Verlagsgesellschaft, Baden-Baden, 1999), p 143 *et seq.* Of great interest is a Commission Staff Working Paper – Accompanying document to the Communication from the Commission to the Council and the European Parliament: Prospects for the internal gas and electricity markets (2007) (SEC(2006)1709), available at http://ec.europa.eu/energy/energy_policy/doc/10_internal_market_country_reviews_en.pdf.

36 The codes are available at www.nationalgrid.com/uk/indinfo.

depended on various factors, relating not merely to the legislative choice of regulated access to the electricity network, but also to political decisions and the history of the industry in question. Apart from the regulation of the natural monopoly, the English system granted extended powers to the regulator and took into account the interests of both shareholders and consumers. It also relied to a high degree on contracts between industry participants, giving the industry the necessary flexibility.[37] It is to be noted, however, that it has taken this country a long time to move to a fully liberalised market, which shows that the development of competition is not easy and requires continuing efforts.

Greece: liberalisation v PPC's monopoly

In Greece, on the other hand, the Public Power Corporation (PPC – Δημοσια Επιχειρηση Ηλεκτρισμου, ΔΕΗ), a state-owned company, was until recently assigned the task of production, transmission and distribution of electricity.[38] It was transformed in 1991 into a corporation under private law with the State as sole shareholder.[39] Law 1559/1985, the first Greek law to encourage market entry, instituted a complex licence regime and established new rights and duties of auto-producers and other independent producers.[40] Law 2244/1994[41] provided for more exceptions to the PPC's exclusive rights in electricity production and supply in favour of auto-producers and independent producers, but maintained a single buyer system prohibiting them from selling to third parties and obliging them to supply their production exclusively to the PPC, which also retained its exclusive rights in the transmission and distribution of electricity. The first Electricity Directive was implemented by Law 2773/1999,[42] which was recently amended by Law 3426/2005[43] in order to comply with the Acceleration Directive. The new framework dismantled the PPC's monopoly introducing significant changes in the Greek electricity market, including the establishment of the Regulatory Authority for Energy (RAE – Ρυθμιστική Αρχή Ενέργειας), which monitors the electricity market and recommends to the Minister of

37 See in this respect Daw, n 35 above, at [13.244].

38 Law 1468/1950, Official Gazette A 169; Legislative Decree 3523/1956, Official Gazette A 174.

39 Presidential Decree 360/1991, Official Gazette A 128.

40 Official Gazette B 135. The Law was amended by Law 1914/1990, Official Gazette A 178.

41 Official Gazette A 168.

42 Official Gazette A 286. The Law was amended by Law 2837/2000, Official Gazette A 178; Law 2941/2001, Official Gazette A 201; Law 2992/2002, Official Gazette A 54; and Law 3175/2003, Official Gazette A 207.

43 Official Gazette A 309.

Development and other competent authorities the measures required to be taken for the protection of competition and consumers.[44]

The Greek 'transmission system' and 'distribution network' are still owned by the PPC. However, the operation of the transmission system has been placed in the hands of the Hellenic Transmission System Operator SA – HTSO SA (Διαχειριστής Ελληνικού Συστήματος Μεταφοράς Ηλεκτρικής Ενέργειας – ΑΕ ΔΕΣΜΗΕ ΑΕ), an independent company operating under licence. Under the recently enacted Law 3426/2005, the HTSO, renamed the Hellenic System and Network Operator SA – HSNO SA (Διαχειριστής Ελληνικού Συστήματος και Δικτύου Ηλεκτρικής Ενέργειας ΑΕ – ΔΕΣ-ΔΗΕ ΑΕ), also becomes responsible for the operation of the distribution network instead of the PPC. Under the Greek system of regulated third-party access, the HSNO SA is obliged to grant access to the transmission system and, under the recently enacted legislation, to the distribution network,[45] in the most economic, transparent and direct manner, without discrimination among the users or categories of users of the system.[46]

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44 As to the Greek regime, see E Adamantidou, 'Legal Framework of the Liberalisation of the Electricity Market' in Centre of International and European Law, *Liberalisation of the Electricity Market: Meeting Reports* (Ant N Sakkoulas, Athens, 2001), p 13 (in Greek); A Arapostathis, *Das griechische Stromversorgungsmonopol und seine Vereinbarkeit mit dem europäischen Recht (EG-Vertrag und Elektrizitätsbinnenmarktrichtlinie)* (Veröffentlichungen des Instituts für Energierecht an der Universität zu Köln 93, Nomos Verlagsgesellschaft, Baden-Baden, 1999), p 87 *et seq*; Cross, n 35 above, at 51 *et seq*; International Energy Agency, Energy Policies of IEA Countries: Greece, 2002 Review, available at www.iea.org/Textbase/publications/free_new_Desc. asp?PUBS_ID=1093; G Karydis, The Legal Regulation of Public Energy Markets in Greece: Oil Products – Natural Gas – Electricity' [1996] OGLTR 215; *idem*, 'Liberalisation of the Greek Electricity Sector Following Directive 96/92/EC' [1999] OGLTR 20; M Kolia, 'Greece' in Cameron (ed), n 10 above, at [9.01] *et seq*; M T Marinos, 'The Legal Framework of the Liberalisation of the Electricity Market' (2001) 42 *Hellenic Justice* 301, 319 *et seq* (in Greek); *idem*, 'Einige Bemerkungen zum Netzzugang im griechischen Energierecht' in U Büdendbender and G Kühne (Hrsg), *Das neue Energierecht in der Bewährung: Bestandsaufnahme und Perspektiven. Festschrift zum 65. Geburtstag von Professor Dr Jürgen F Baur* (Nomos Verlagsgesellschaft, Baden-Baden, 2002), p 33; *idem*, *The Access to Energy Network: The Liberalisation of the Electricity Market* (Studies on Business Law 23, Ant N Sakkoulas, Athens, 2003) (in Greek); M Papantoni, 'The Liberalisation of the Electricity Market' (2002) 8 *Business & Companies Bulletin* 267, 269 *et seq* (in Greek); *idem*, n 10 above, at 105-167; *idem*, n 35 above, at 192 *et seq*; E Papathanassopoulou, 'The Implementation of Directive 96/92/EC Concerning the Rules on the Internal Electricity Market: Law 2773/1999' [2000] *Hellenic Review of European Law* 63 (in Greek); M I Velegrakis, 'Deregulation of State Monopolies and Electricity' (2005) 53 *Legal Tribune* 1498, 1505 *et seq* (in Greek). See also Commission Staff Working Paper (n 35).

45 Until the assumption of HSNO SA's duties, the tasks of the Network Operator will be performed by the PCC under provisional licence.

Moreover, Law 3426/2005 provides for the construction of direct connections between generating plants and suppliers that are not part of the transmission system or the distribution network. The tariffs charged by the HSNO SA for the connection and use of the system and the network are approved by the Minister of Development after the national regulatory authority has expressed its opinion and approved the methodology for the calculation.

Harmonisation with the European legal framework and regulation of access to the electricity network has yet to lead to significant improvements. Apart from the dominant role of the PPC, which is the owner of both transmission and distribution networks and also until recently responsible for the operation of the distribution network, one of the main problems has been the distortion of prices. In the past, prices were too low to cover the cost of supply. Moreover, prices have been uniform throughout the country, including in geographical areas where supply cost is well above the average, since the government used energy pricing to control inflation and pursue social objectives. HTSO SA (now HSNO SA) experienced significant difficulties in proposing third-party access tariffs because the PPC did not provide sufficient information. Even now, when a set of prices is approved by the RAE, it still needs final approval from the Minister of Development, which creates significant delay. Unfortunately, the Minister of Development still has important decisive regulatory powers, such as the grant of the necessary licences, the approval of the code and industry documents and determination of the regulated tariffs and other administratively set prices, while the RAE has mostly consultative competences. This has resulted in market inflexibility as well as in the intervention of the State in the market in such way that may lead to the distortion of competition and the use of the competition policy for the fulfilment of irrelevant aims.[47] Obviously, such inefficiencies, combined with the small size of the market, have significantly discouraged investments in the electricity sector in Greece. As a result, despite legislative efforts, the electricity market is far from having a competitive structure.

46 It has been argued that the real meaning of this provision is that there should not be undue discrimination between similar categories of users (eg that are in the same field of business activity) and if the categories are different the issue of discrimination does not arise at all. On this issue, see Kolia, n 10 above, at [9.16]; Marinos, *The Access to Energy Network*, n 44 above, at 170-172.

47 Kolia, n 10 above, at [9.89]; Marinos, *The Access to Energy Network*, n 44 above, at 142-143.

Germany's experiment with negotiated third-party access

In Germany, the electricity sector has long since been regulated by the Electricity Industry Act (Energiewirtschaftsgesetz – EnWG)[48] and the Act against Restraints to Competition (Gesetz gegen Wettbewerbsbeschränkungen – GWB).[49] The former came into force in 1935 with the objective of establishing a secure and reasonably priced electricity supply system under the supervision of the federal and local authorities and was based on monopolistic supply systems for each local area of supply. In order to comply with the first Electricity Directive, the EnWG was amended in 1998 and 2003, demolishing the monopolistic structure in the electricity sector and subjecting it to the full control of the cartel authorities. In July 2005, Germany enacted extensive amendments to the EnWB in order to comply with the Acceleration Directive.[50]

Under German law, the electricity market is divided into three grid levels, which correspond to the three groups of companies operating them. The first level consists of large-scale power generation and long-distance transmission companies (*Verbundunternehmen*). At the second level, regional power distributors are responsible for operating the medium voltage grid in a specific region. The third level is made up of local utilities, which own

48 Federal Law Gazette 2005 I (1970) 3621 (as effective).

49 Federal Law Gazette 1998 I 2521.

50 For an overview of the regulation of the electricity market in Germany, see, *inter alia*, R Breuer, 'Umsetzung von EG-Richtlinien im neuen Energiewirtschaftsrecht' [2004] NVwZ 520; U Büdenbender, 'Die Entwicklung des Energierechts seit In-Kraft-Treten der Energierechtsreform von 1998' [2001] DVBl 952; *idem*, 'Möglichkeiten und Grenzen einer Deregulierung in der leitungsgebundenen Energiewirtschaft' [2002] DÖV 375; C Corino, *Energy Law in Germany and its Foundations in International and European Law* (CH Beck, München, 2003), pp 47-61; Cross, n 35 above, at 125 *et seq*; Daintith and Hancher, n 35 above, at 78; C Dobler, 'Regulierung des Wettbewerbs im Strom- und Gasmarkt in Deutschland' in Hancher, n 35 above, at 67 *et seq*; K P Horstmann, 'Liberalisation of Electricity and Gas Markets in Germany' (2003) 4 IELTR 116; G Kühne, 'Incremental Regulatory Reform and Antitrust Law in the Energy Sector: The German "Middle of the Road" Approach' (1996) 14 J Energy Nat Resources L 76; *idem*, 'Die Reform des Energiewirtschaftsrechts nach der Novelle 2003' [2003] NVwZ 769; M Kuxenco, 'Liberalisierung und Deregulierung im Energiewirtschaftsrecht' [2001] DÖV 141; Pfrang, n 10 above, at 103 *et seq*; Papantoni, n 36 above, at 186 *et seq*; J Perner and C Riechmann, 'Deregulation Debate in the German Electricity Supply Industry' (1998) 9 ULR 33; J C Pielow and H M Koopmann, 'Energy Law in Germany' in Roggenkamp, Ronne, Redgwell and del Guayo (eds), n 35 above, at [8.01] *et seq*; K Pritzsche and S Klauer, 'Germany' in Cameron (ed), n 10 above, at [8.01] *et seq*; P Salje, 'Das Gesetz zur Neuregelung des Energiewirtschaftsrechts' [1998] NVwZ 916; Schneider, n 36 above, at 144 *et seq*; E Staebe, 'Zur Novelle des Energiewirtschaftsgesetzes (EnWG)' [2004] DVBl 853; C Theobald and D Schiebold, 'Aktuelle Entwicklungen des Energierechts' (2003) 94 *Verwaltungs-Archiv* 157. See also Commission Staff Working Paper (n 35).

and operate the local, low voltage distribution grids and supply end-customers.

At the beginning of the liberalisation process, Germany opted for the model of negotiated third-party access, which was governed, apart from the relevant provision of the EnWG, by the GWB. The reasons the German Government gave for choosing this model included the complex market structure in Germany and a preference for negotiation – to regulation – for achieving consensus and voluntary measures. It considered that even introducing a single transmission tariff would be difficult, given that there were eight privately owned supra-regional companies in 1998. The EnWG empowered the Federal Ministry of Economics to establish criteria for the determination of transmission fees and the structuring of transmission agreements. However, the government considered that this was not necessary as long as the electricity industry itself came up with suitable regulations. In this framework, the industry associations concluded agreements (*Verbändevereibarungen*) concerning the criteria for the determination of network tariffs for electricity, which, however, gave rise to disputes owing to their anti-competitive provisions. This legal uncertainty, which left numerous legal questions to be solved by the courts and competition authorities, led to discussions about the effectiveness of the chosen model of negotiated third-party access and to concerns about the suitability of the industry associations' agreements to solve the problems that arose. Indeed, while negotiated third-party access reduces the need for regulatory intervention and regulatory cost because access prices are determined through negotiation by market players, the process can be time consuming and burdensome for small market players and it can result in discriminatory access conditions. As a result, network access remained problematic with the level of access tariffs being relatively high, while dispute settlement processes were slow and costly.[51]

51 A R Börner, 'Negotiated Third Party Access in Germany: Electricity and Gas' (2002) 20 JERL 27; U Büdenbender, 'Die Energieversorgungsaufsicht über Energieversorgungsunternehmen nach dem neuen Energiewirtschaftsgesetz' [1999] DVBl 7; International Energy Agency, Energy Policies of IEA Countries: Germany, 2002 Review, available at www.iea.org/Textbase/publications/free_new_Desc.asp? PUBS_ID=1097; H Lecheler and J Gundel, 'Staatliche Regulierung des Energiemarkes?' [2001] EWS 249; J C Pielow, 'Wie "unabhängig" ist die Netzregulierung im Strom- und Gassektor?' [2005] DÖV 1017; H Pilz, 'Netznutzungsentgelte für Stromlieferung in der Kritik' [2001] WuW 552; M Schmidt-Schenke, 'Netzzugang in der Elektrizitäts- und Gaswirtschaft' in M Schmidt-Schenke and B M Zinow (Hrsg), *Grundlagen des Energierechts* (VWEW Energieverlag, Frankfurt am Main, 2004); I Zenke, 'Germany's Electricity and Gas Markets Stand Alone: Negotiated Third Party Access' (2003) 21 JERL 143.

Eventually, the problem was solved by the European Commission's decision to require regulated third-party access by the Acceleration Directive. In order to comply with the new Directive, Germany enacted extensive amendments to the EnWG giving up the system of negotiated third-party access and establishing a national regulatory authority, the Federal Network Agency (Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen), which regulates all network industries in Germany and will determine and monitor network access, network operation and network fees in the electricity market.[52]

Even though there are many companies active on the German electricity wholesale market, the market is dominated by only four large electricity producers (RWE, E.ON, Vattenfall and EnBW), which play an important role at the supply level too. This vertical and horizontal integration discourages new entries and may lead to market foreclosure, although the market in question is often characterised as open.[53] Moreover, not many customers have switched supplier so far, while network access charges as well as prices at the supply level are considered too high.[54] As in the case of England and Wales and Greece, the example of Germany demonstrates that effective liberalisation of the electricity market depends on a series of factors. The regulation of access to the network is important and the German experience has shown that sector-specific regulation at this stage is required. However, the way other issues are regulated as well as the overall market structure still play an important role in the competitiveness of the given market.

Conclusion

The advantages of sector-specific regulation and the disadvantages of general competition rules for the liberalisation of the electricity sector, analysed in general terms in the second part of this article, have been subsequently verified in the third part in relation to the positive effects of the implementation of the model of regulated third-party access to the electricity

52 U Ehricke, *Die Regulierungsbehörde für Strom und Gas* (Veröffentlichungen des Instituts für Energierecht an der Universität zu Köln 113, Nomos Verlagsgesellschaft, Baden-Baden, 2004); C Koenig and J Kühling, 'Institutionelle Regulierung in der Eisenbahn- und Energiewirtschaft – sektorspezifische Regulierungsbehörden oder Bundeskartellamt?' [2001] WuW 810; H W Rengeling, 'Das System des Netzentgeltregulierung in der Elektrizitäts- und Gaswirtschaft' [2006] DVBl 197; R Röger, 'Die Regulierungsbehörde für Telekommunikation und Post als zukünftiger Energiemarktregulierer' [2004] DÖV 1025.

53 See Commission Staff Working Paper (n 35) at 33.

54 This may be explained by the rising demand for energy and primary energy sources and the impact of wind power in Germany. *Ibid.*

network in England and Wales, as opposed to the inefficiencies caused by the initial adoption of the model of negotiated third-party access in Germany. However, the Greek experience has shown that even if sector-specific rules are established, their effectiveness depends mainly on the way they are implemented and, therefore, regulatory authorities play a key role in this respect. At the same time, one should bear in mind that, apart from a successful institutional framework, the already existing market structure and conditions determine to a large extent the effectiveness of sector-specific rules. This assumption may explain the remarkably slow development of the commercial, financial and competitive possibilities that liberalisation may bring to new entrants in Greece, despite full implementation of the European legislation. On the contrary, the German electricity market, in spite of the experimentations it carried out and the regulatory failures it faced, seems to have achieved a higher degree of competitiveness in the electricity sector than Greece. One should not forget, however, that it took England and Wales approximately ten years before a fully competitive energy market was established, while in Greece the liberalisation process only began in 1999. This shows that, apart from regulation, effective liberalisation requires time, patience and persistence.

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