ELECTRICITY AND GAS SUPPLY NETWORK
UNBUNDLING IN GERMANY, GREAT BRITAIN AND
THE NETHERLANDS AND THE LAW OF THE EUROPEAN UNION:
A COMPARISON
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Eckart Ehlers
To my family
my wife Conny, my father († 10/09/2009) and mother and my brother Jörg
for their endless support and unshakable confidence
PREFACE

The idea of writing a PhD thesis on this subject emerged both from my experience in the area of corporate restructuring and from the debate that took place in Germany following the entry-into-force of the second generation of internal energy market legislation in summer 2003. In the ensuing quest to find top class supervision, it was a great honour and pleasure to be accepted by Professor Leigh Hancher. She not only managed to set (and keep) this work on track with her uniquely unflappable and cheerful attitude; the progress of the work also benefited immensely from her sharp mind and generous forbearance in leaving me room to develop my ideas even if they varied from her own opinion.

This work, however, would not have flourished without both the excellent infrastructure and research conditions of Universiteit van Tilburg and the supportiveness of its people, in particular of the Department of European and International Public Law at the Faculty of Law and of the Tilburg Law and Economics Center TILEC. In this context, I am greatly indebted to my second supervisor Professor Pierre Larouche for his guidance on academic analysis, his availability to discuss matters and his general support, not to mention his endless patience. I also wish to express my deepest gratitude and respect to Professor Willem van Genugten and Professor Eric van Damme for their interest, generosity and open-mindedness, and for their warm reception.

A special role in this PhD research was played by Professor Gert Brunekreeft whom I was privileged to meet when I arrived in Tilburg in autumn 2004 and who has become a mentor and friend. Thanks to him, this work became part of the interdisciplinary and international project UNECOM (www.unecom.de), which he initiated soon after becoming Professor of Energy Economics at Jacobs University Bremen. As a result, I moved to the Institute of Energy and Mining Law at the Ruhr-Universität Bochum headed by Professor Johann-Christian Pielow where I participated in the UNECOM project as a researcher until leaving Bochum at the end of June 2009, and I would like to express my sincere gratitude to him for what was, for me, two years of rewarding and fruitful collaboration on this project.

Special mention and thanks go to Jeroen Denkers who had to put up with me in the same office for more than two and a half years, for his open-mindedness and never-ending support, to Sophie van Bijsterveld for her interest in my work and
patient explanations of Dutch constitutional law, and to Aukje van Hoek. In Bochum, I could not have succeeded without the general legal expertise and permanent readiness for discussion of Christian Schimansky, the collegiality and vivacity of Sindy Güneysu and the much appreciated support of Jacopo Rossi.

Without Mark Pakenham, a friend and former colleague of mine whilst working in the UK, and his selfless support and very English articulacy, this work would be of substantially lesser linguistic quality.

Last but not least, this PhD thesis has substantially benefitted from the financial support of the Dutch foundation Next Generation Infrastructures in Delft and the industry co-sponsors of UNECOM. A significant financial contribution by the Institut d’Études Juridiques Européennes of the Université de Liège is also gratefully acknowledged.

Hannover/Karlsruhe, November 2009

Eckart Ehlers
EXECUTIVE SUMMARY

This work analyzes the legitimacy of energy supply network unbundling measures exceeding the current legal unbundling requirements as threatened or proposed by the European Commission on the basis of European economic regulation competences.

Apart from threatening to order the divestiture of energy networks of individual vertically integrated energy supply undertakings, the Commission originally proposed to either impose energy transmission network ownership unbundling (OU) or “deep” independent system operation (“deep” ISO), which would give independent energy transmission system operators exclusive investment decision and commissioning powers.

In addition, the current draft Electricity and Gas Directives contain as a third option the implementation of independent transmission operators (ITOs). Because this option is merely a stricter form of legal unbundling, it is not the subject of the analysis here as to what extent the further legislative unbundling measures OU and “deep” ISO are in breach of economic fundamental rights as protected in Germany, Great Britain, the Netherlands and the European Union.

A. EC competences in competition law and sector regulation

Ordering the divestiture of individual vertically integrated energy supply networks on the basis of the Commission’s competition law enforcement powers would be disproportionate to the objective sought, which is to restore competition in an internal energy supply market. Legal ownership unbundling or divestiture and “deep” independent system operation of energy supply networks would, if at all, only be of marginal benefit to consumer welfare. For electricity, the benefit largely depends on the existence of sufficient generation. With respect to gas, it is shown that regulation in tandem with competition law enforcement suffices.

With regard to EC legislation, assuming that it was in principle legitimately based on the harmonization competence of Article 95 EC to introduce further unbundling measures as originally proposed by the Commission, the EC legislature would in fact not be allowed to exercise this competence for several reasons. The primary reason is that this would be a breach of Article 295 EC because the EU is not competent to legislate in the area of property ownership.
allocation. Further, the fundamental freedom of the free movement of capital according to Article 56 EC would be compromised because the current draft Directives in prohibiting vertically integrated energy production and supply undertakings of one Member State from investing into ownership unbundled energy transmission network operators of other Member States cannot be justified with public policy and security reasons or overriding interests.

B. Evolution of energy supply sectors in Germany, Great Britain and the Netherlands

The energy supply sectors in Germany, Great Britain and the Netherlands have developed rather distinctly and display rather diverging stages of energy network unbundling.

The Netherlands are and remain a natural gas exporting country for the time being. The Dutch energy supply industry has always been (predominantly) state-owned (i.e. including municipalities and provinces); all energy networks are state-owned and as such subject to regulation. New legislation has recently been passed ensuring that this remains the case for the time being.

The UK has only recently turned from a natural gas exporting to an importing country. The energy supply industry in England, Wales and Scotland (Great Britain) is equipped with sufficient electricity generation and was privatized some two decades ago, the electricity sector in England and Wales vertically separated \textit{ab initio} (at least with respect to transmission) and the gas sector in Great Britain vertically integrated but separated voluntarily about a decade after privatization. A great deal of work was needed before regulation began to work effectively (in particular in the gas sector but also in electricity wholesale). Since privatization, it has not \textit{forced} further unbundling upon its energy sector except for creating an independent GB electricity transmission system operator with some influence on investment.

Germany, which has never possessed significant natural gas resources, has always been heavily reliant on coal as primary energy source. Germany’s energy supply sector has always been in private hands or in the hands of municipalities, which enjoy a certain degree of autonomy as a result of Germany’s federal structure. Liberalization has taken almost a decade culminating in the late introduction of a sector-specific regulatory authority in July 2005, which has made considerable progress ever since (with incentive regulation introduced in 2009).
C. **Constitutional law and fundamental rights protection**

The different developments in market structure are also a consequence of the contrasting constitutional settings of Germany, the UK and the Netherlands and the differences in fundamental rights protection.

In the UK and the Netherlands, the European Convention of Human Rights (ECHR) is in principle *the* fundamental rights standard, against which national legislation is to be measured. In the UK and the Netherlands directly applicable EC legislation is to be measured against EC fundamental rights.

In the UK the ECHR is only (to a limited extent) applicable via the Human Rights Act 1998 whereas in the Netherlands the ECHR is part of the national legal order as is, in principle, EC law.

In Germany, national legislation is measured against the requirements of the German Constitution; directly applicable EC legislation as well as EC Directives are not measured against German constitutional law as long as they live up to a similar fundamental rights standard as is afforded by the German Constitution.

In the UK, the doctrine of parliamentary sovereignty has historically led to the submission of the judiciary to Parliament to the extent that Acts of Parliament are not reviewed under English law. A further consequence of this doctrine is the acceptance that fundamental rights have always been subject to unfettered interference by Parliament normally based on political bargaining. This constitutional setting has certainly been conducive to the success of UK style energy supply sector regulation.

In Germany, the Federal Constitutional Court *Bundesverfassungsgericht*, which safeguards the German Constitution and thus also reviews Acts of Parliament, has developed and enforced a rather detailed fundamental rights protection, which directly influences German style (energy supply) sector specific regulation, which focuses stricter on the rule of law than on regulatory bargaining.

The Netherlands finds itself positioned half-way between the UK and Germany in that national legislation can also be reviewed albeit only against the standard of the ECHR and not against the standard of the national constitution *Grondwet*.

In Germany, the analysis of the applicability of fundamental rights to further unbundling measures as proposed by the Commission, or more specifically, any possible implementation of such measures into German law, leads to the conclusion that ownership unbundling would be a disproportionate expropriation and
“deep” independent system operation would be a regulation of ownership amounting to expropriation, which would also be disproportionate.

In the UK, the complete transfer of the investment decision and commissioning powers of the two vertically integrated electricity transmission network owners in Scotland would mean a deprivation of property in the form of a *de facto* expropriation while complete ownership unbundling would be a deprivation of property in the form of an expropriation according to the ECHR as applied in the UK via the Human Rights Act 1998.

In the Netherlands, the vertical integrated energy supply undertakings wholly owned by municipalities and provinces in principle enjoy fundamental rights protection under the ECHR whereas the public shareholders do not. It is, however, shown that any recourses to such protection would be of no avail. This is because under the ECHR, the deprivation of property in the form of (*de facto*) expropriation of the vertically integrated energy distribution networks would be unlikely to be classified as disproportionate as long as sufficient compensation is paid, which however would be of no use to the vertically integrated energy supply undertakings owned by subdivisions of the Dutch State given that such compensation would just circulate within the (Unitary) state organization.

Measuring the two original Commission proposals against the fundamental rights protection as afforded by the ECJ, ownership unbundling is classified as a deprivation of property in the form of an expropriation and "deep" independent system operation a deprivation of property in the form of a *de facto* expropriation, both of which would be disproportionate.

Further, the acceptance in the Commission proposals and in the current draft Directives that the mere transfer of publicly owned energy transmission networks to a part of the state organization separate from the part, which is responsible for the publicly owned vertically integrated energy supply undertaking would fulfil the unbundling requirements of the new legislation amounts to a manifest breach of the principle of equality because it would significantly disadvantage private undertakings.

As regards the question of whether public owners and shareholders and vertically integrated energy supply undertakings (partly) owned or controlled by public institutions such as municipalities and provinces can claim fundamental protection, one has to distinguish between the situation in Germany, that under the ECHR and that under EC law.
In Germany, it is argued here that both municipalities, which possess a special status within the federal state organization because their institutional existence is constitutionally guaranteed, and the vertically integrated energy supply undertakings (partly) owned by them (in public and public private undertakings of public and private law) would enjoy protection of their (economic) fundamental rights under the German Constitution in the specific context of pursuing a competitive economic activity of energy supply.

Under the ECHR, it is established that municipalities as governmental organizations according to Article 34 ECHR are not protected. It is, however, further argued here that vertically integrated energy supply undertakings would be protected if they possess legal personality (no matter whether under public or private law) as long as their legal personality is recognized under national law and as long as they do not exercise public authority; both characteristics distinguish them from belonging to the state organization.

In the EU, fundamental rights protection solely depends on whether undertakings seeking such protection pursue an economic activity and take part in the competitive process, no matter whether it possesses legal personality. Thus, public and private undertakings are likely to enjoy protection.

When it comes to effective fundamental rights protection, it seems that the German BVerfG offers the higher standard compared to the ECtHR and in particular the ECJ.

The proportionality test as applied by the BVerfG in Germany, has been developed into a very detailed and elaborate process of balancing the various opposing interests at stake in the case of interference with fundamental rights and has been strictly and effectively applied in Germany also in the context of reviewing parliamentary legislation.

The fair balance test used by ECtHR by contrast albeit similar in structure to the proportionality test rarely considers fundamental rights interferences disproportionate, which as has been explained before seems to be attributable to two reasons: first, to date the provision of adequate compensation appears to have had a significant influence on the proportionality of state measures under review and, secondly, the Court accepts that the Member States and local authorities are usually better equipped to judge the proportionality of fundamental rights interferences of measures they enforce.
Although EC (case) law includes a proportionality test similar in structure to the test applied in Germany, on the basis of the case law under review here of, the three courts the ECJ seems to afford the least effective fundamental rights protection because it hardly ever finds fundamental rights interference disproportionate, particularly so in the area of economic fundamental rights such as the right to property.

D. Selection of conclusions and outlook

Economic (and technical) evidence shows that more effort should be put into promoting generation, which if done properly would even make the extension of energy transmission network interconnection less urgent, which in turn would weaken one of the main arguments put forth in favour of further unbundling.

When one looks into what further unbundling does for the European energy supply markets, energy transmission network ownership unbundling delivers only marginal benefits for the creation of an internal and competitive energy supply market and the consumers’ benefit. In addition, its benefits for increased investment are, to say the least, unclear. Security of energy supply is better served by other policies, namely by installing more (independent) generation capacity, which also has a greater impact on the development of competition than further network unbundling. What is more, further energy transmission network unbundling would, contrary to its purpose, unlevel the playing field in the European energy supply markets even further.

Further unbundling measures as envisaged by the original Commission proposals and even more by the current draft Directives, i.e. inclusive of the ITO model, is likely to intensify vertical integration of energy production and retail. The third energy package deepens regulatory differences in the Member States; differences in energy supply market structure in the various Member States might become even greater. Further network unbundling of public and private vertically integrated energy supply undertakings carries the same label (“ownership unbundling”), but could effectively mean less intrusive unbundling for public undertakings thus leading to unequal treatment of the public and private energy supply companies (and thus unequal interference with their respective economic fundamental rights), which would also affect their investment opportunities in Member States which have enforced ownership unbundling.

It is, however, shown that properly regulated TPA implemented via competition law enforcement, which may also include the connection of generation, is one of a combination of measures, which can achieve the goal of a more competitively working internal energy supply market in a proportionate way.
One of such measure is the release of gas and/or electricity generation considering that liquid energy wholesale markets or independent generation and independent import contracts (hub trading) with gas producers combined with access to gas import pipelines (pipeline capacity trade independent of gas take obligations) are actually more effective and efficient than energy transmission network ownership unbundling to achieve an internal and competitive energy supply market and also considering that the European Union does not have the competence to regulate in this area as it falls into the remit of the Member States’ to regulate their national energy production sectors.

Another such measure is the tightening of the regulatory regime already in place in order to clarify ambiguities and to narrow down margins of interpretation. Uniform requirements for the extension of electricity and gas transmission interconnectors in all Member States and the promotion of merchant transmission, including by way of predictable and uniform licence conditions to enhance the availability of energy throughout the European Union, is another prerequisite for the development of energy supply competition in the EU. Further, stronger regional cooperation is required as envisaged by the current draft Directives including the strengthening of ERGEG.

The imposition of further unbundling measures on the European energy supply industry with such far-reaching consequences for the (economic) fundamental rights of the intended targets of such measures cannot be done by simply disregarding the common constitutional traditions of the Member States or merely assuming the application of the “lowest common denominator” of fundamental rights protection.

The ECJ should effectively develop and enforce a fundamental rights standard in the European Union, which is based on the common constitutional traditions of the Member States. As the “constitutional” court of the European Union with corresponding judicial powers, which are supposed to ensure the compliance of EU institutions with EC law including EC fundamental rights, its role is more akin to that of national courts than to that of the ECtHR.

Effective fundamental rights protection by the ECJ would in turn enhance the national acceptance of the supra-national legal order, which would in turn enhance the democratic functioning of the EU, and would encourage greater cooperation at EU level with respect to the completion of the internal market. It would further secure the rule of law at EC level by restraining political bargaining, which is sometimes far removed from its democratic foundations. It would also make the Commission and the Parliament aware of their role in not only guarding
the Treaty’s objective to constructing the internal market but also the Treaty’s other objective, which is to respect common constitutional traditions.

Similar to the significant influence which the UK approach to energy supply sector regulation has had on EC energy supply sector regulation, the German approach to a structured (economic) fundamental rights protection should significantly assist the EU in making its approach to fundamental rights protection more robust and effective.
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ACER
Agency for the cooperation of energy regulators

BayVGHE
Official publication of Constitutional Court of
(German State of) Bavaria decisions (cited as
BayVGHE volume, page)

BETTA
British Electricity and Transmission Arrangements

BG
British Gas plc.

BGBL.
Bundesgesetzblatt (German Gazette; official
publication of legislation)

BGH
Bundesgerichtshof (highest German court in civil
and criminal matters)

BGHZ
Official publication of Bundesgerichtshof (in civil
matters) decisions (cited as BGHZ volume, page)

BKartA
Bundeskartellamt (German competition authority)

BNetzA
Bundesnetzagentur (German regulator of network-
bound electricity, gas, telecommunications, postal
and rail sectors)

BSC
Balancing and Settlement Code

BT-Drs.
Bundestag-Drucksache (German Federal
Parliament printed matter; cited as BT-Drs.
parliamentary term/consecutive number; e.g.,
BT-Drs. 2/3440)

BTO Elt
Bundestarifordnung Elektrizität (Federal Tariff
Ordinance on household electricity price
increases)

BVerfG
Bundesverfassungsgericht (German Federal
Constitutional Court)

BVerfGE
Official publication of Bundesverfassungsgericht
decisions (cited as BVerfGE volume, page)

BVerwG
Bundesverwaltungsgericht (highest German court
in public law matters)

BVerwGE
Official publication of Bundesverwaltungsricht
decisions (cited as BVerwGE volume, page)

CAT
Competition Appeals Tribunal

CC
Competition Commission (previously Monopolies
and Mergers Commission)
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CEGB</td>
<td>Central Electricity Generating Board</td>
</tr>
<tr>
<td>CFI</td>
<td>European Court of First Instance</td>
</tr>
<tr>
<td>ch.</td>
<td>Chapter</td>
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<tr>
<td>CHP</td>
<td>Combined heat and power generation</td>
</tr>
<tr>
<td>CUSC</td>
<td>Connection and Use of System Code</td>
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<tr>
<td>DG</td>
<td>Distributed generation</td>
</tr>
<tr>
<td>DGFT</td>
<td>Director General of Fair Trading</td>
</tr>
<tr>
<td>Draft Energy Directives</td>
<td>Draft Electricity and Gas Directives (as passed by the European Parliament in April 2009 and finally adopted unamended by the Council of the European Union on 25 June 2009)</td>
</tr>
<tr>
<td>DSO / DNO</td>
<td>Distribution System / Network Operator</td>
</tr>
<tr>
<td>DTe</td>
<td>Dutch energy regulator Directie Toezicht Energie</td>
</tr>
<tr>
<td>DTI</td>
<td>Department of Trade and Industry</td>
</tr>
<tr>
<td>EC</td>
<td>(Treaty establishing the) European Community</td>
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<tr>
<td>ECA</td>
<td>European Communities Act 1972</td>
</tr>
<tr>
<td>ECFR</td>
<td>Charter of Fundamental Rights of the European Union</td>
</tr>
<tr>
<td>ECHR</td>
<td>European Convention of Human Rights</td>
</tr>
<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
</tr>
<tr>
<td>ECtHR</td>
<td>European Court of Human Rights</td>
</tr>
<tr>
<td>Energy Directives</td>
<td>Electricity and Gas Directives</td>
</tr>
<tr>
<td>Energy Regulations</td>
<td>Electricity and Gas Regulations</td>
</tr>
<tr>
<td>EnWG</td>
<td>Energiewirtschaftsgesetz (German Energy Industry Act)</td>
</tr>
<tr>
<td>ERGEG</td>
<td>European Regulators’ Group for Electricity and Gas</td>
</tr>
<tr>
<td>ESU</td>
<td>Energy supply undertaking</td>
</tr>
<tr>
<td>EU</td>
<td>(Treaty on) European Union</td>
</tr>
<tr>
<td>E-wet</td>
<td>Dutch Electricity Act 1998</td>
</tr>
<tr>
<td>GB</td>
<td>Great Britain (England, Wales and Scotland)</td>
</tr>
<tr>
<td>GC</td>
<td>Grid Code</td>
</tr>
<tr>
<td>GEMA</td>
<td>Gas and Electricity Markets Authority</td>
</tr>
<tr>
<td>GG</td>
<td>Grundgesetz (German Constitution)</td>
</tr>
<tr>
<td>GTS</td>
<td>Gas Transport Services B.V.</td>
</tr>
<tr>
<td>G-wet</td>
<td>Dutch Gas Act</td>
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<tr>
<td>GWB</td>
<td>Gesetz gegen Wettbewerbsbeschränkungen (German Competition Act)</td>
</tr>
<tr>
<td>HRA</td>
<td>Human Rights Act 1998</td>
</tr>
<tr>
<td>IGT</td>
<td>Independent Gas Transporter</td>
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<tr>
<td>I&amp;I-wet</td>
<td>Interventie&amp;Implementatiewet</td>
</tr>
</tbody>
</table>
List of Abbreviations

ITO Independent Transmission Operator
ISO Independent System Operator
Kamerstuk Document exchanged between Dutch government and Dutch Parliament
LDZ Local Distribution Zone
LTC Long-term contract
Merger Regulation Regulation (EC) No. 139/2004
Modernization Regulation Regulation (EC) No. 1/2003
NCA National Competition Authority
NETA New Electricity Trading Arrangements
NEV Gas Netzentgelterordnung Gas (Regulation on gas network charges)
NEV Strom Netzentgelterordnung Strom (Regulation on electricity network charges)
NGC National Grid Company plc.
NGET National Grid Electricity Transmission plc.
NGG National Grid Gas plc.
NMa Nederlandse Mededingingsautoriteit (Dutch competition authority)
NRA National Regulatory Agency
NTS National Transmission System
NZV Gas Netzzugangsverordnung Gas (Regulation on gas network access)
NZV Strom Netzzugangsverordnung Strom (Regulation on electricity network access)
OFGEM Office for Gas and Electricity Markets
OFT Office of Fair Trading
PES Public Electricity Company
REC Regional Electricity Company
RES Renewable energy sources
RIA Regulatory Impact Assessment
SCBA Social cost and benefit analysis
Sep Samenwerkende electriciteits-productiebedrijven
SO/TO Code System Operator/Transmission Owner Code
SP Scottish Power
SSE Scottish and Southern Energy
Stb. Staatsblad van het Koninkrijk der Nederlanden (official publication of legislation)
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>Stc.</td>
<td>Staatscourant van het Koninkrijk der Nederlanden (official publication of statutory instruments)</td>
</tr>
<tr>
<td>TFEU</td>
<td>Treaty on the Functioning of the European Union (Lisbon Treaty)</td>
</tr>
<tr>
<td>TPA</td>
<td>Third Party Access</td>
</tr>
<tr>
<td>TSO</td>
<td>Transmission System Operator</td>
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