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Legal Regulation of the European Union Energy Market

T. KROPE[1], J. KROPE[2], M. PUKSIC[3]
[1]L.L.M. student at University College London, Faculty of Laws
Bentham House, Endsleigh Gardens
London WC1H 0EG
UNITED KINGDOM
[2]Faculty of Chemistry and Chemical Engineering
University of Maribor
Smetanova 17, Maribor
SLOVENIA
[3]Javni zdravstveni zavod – Mariborske lekarne
Minarikova 6, Maribor
SLOVENIA

Abstract: This article represents the guidelines of European Union legislation in respect of achieving its adopted objective and regulative aims; the influences that the legislation and 'acquis communautaire' have on market participants and on the adoption of new laws for the supply of natural gas, encompassing environmental protection.

Key Words: energetics, energy market, Energy Act, 'acquis communautaire', natural gas, environmental protection

1 Introduction

The 'acquis communautaire' (Community patrimony) is the body of common rights and obligations which binds all Member States together. It is founded principally on the Treaty of Rome and supplementary acts (the Single European Act, the Treaty of the European Union etc.), plus the large body of secondary legislation which derives from them.

A directive is an instruction by the Community to a Member State to legislate on a particular matter within a defined period of time. A directive gives a legislative outline, but allows each Member State to decide the details of the legislation when implementing its own laws.

With the adoption of new European Parliament and Council directives concerning common rules for the internal market in natural gas ('Directive 2003/55/EC') [1], the Member States of the European Union are responsible for the incorporation of the directives into their national legislation.

The new priorities stem from the creation of a more open and competitive internal energy market, as a result of the implementation of 'Directive 96/92/EC' of the European Parliament and the Council of the 19th December 1996 concerning common rules for the internal market in electricity, and of 'Directive 98/30/EC' of the European Parliament and the Council of the 22nd June 1998 concerning common rules for the internal market in natural gas.

We have to take national budgets into consideration, in order to determine the criteria for regulative and realistic Acts within a country, which would stimulate the development of demand for natural gas. These include the efficient use of energy, environmental impacts, the diversification of supply, the expansion of supply etc.

The energy markets in the countries of the European Union are each at different levels of development. Some markets have been around for a long time, but electricity and natural gas markets are subject to constant changes and development, especially in regard to the economical use of energy, the efforts to preserve the environment, and living space. To accomplish an optimal relationship between a satisfactory and a healthy human environment, the use of energy, and the costs of modern technical and organizational solutions, it is necessary to ensure a synergy between the consumer and electricity supplier.

2 The global issues of exploiting national energy resources

The World started to face serious and concerned global issues in connection with the environment and nature, some time ago, but it has taken far too long for people and scientists to realize how the climate has severely changed over past decades and is causing devastating natural catastrophes [2]. It would be justified to say, in the sense of the uncertain future of what used to be a healthy environment, that 'what we are dealing with now is something we have to get used to.' By saying this, we implicitly remind ourselves, that the effect of global warming has already caused damaging consequences to our planet, as well as to healthy human living space. The enormous emissions of carbon dioxide have finally been recognized as a priority problem concerning the future of humankind. Challenged by serious global problems, the human race has finally come down to earth and started looking for solutions. The Protocol of Montreal (1987), the Conference in Rio de Janeiro (1992), the World Congress about the climate in Kyoto (1997) – these are just some of the measures leading countries are trying to adopt when finding a way out of this unenviable situation.

Firstly, we have to give up the existing paradigm of a materialistic view of the world and transfer our knowledge, future possibilities and technology towards a calmer way of life in the area of natural energy resource exploitation. A situation seems to be developing where we will be dealing with a blossoming solar era and developing new ways of exploiting renewable energy sources. These can play a significant role in efforts to reduce the negative effects of global warming and with the purpose of limiting environmental pollution and promoting energy conservation. What we have left right now is hope – a hope of finding satisfactory future solutions, new sources of energy to preserve the environment and save humankind from inevitable disaster.

3 The Energy Act according to the new gas directive

The accession of Slovenia to the European Union has given commercial law new perspectives and to Slovenia, as a Member State, obligations to harmonize its legislation coherently within contemporary economic areas and the obligation to incorporate the necessary directives into its legislation.

It is difficult to give a definition of commercial law – it could be understood as the law of macroeconomics, state intervention, settlement of disputes between the state and the economic community, the law on commercial companies etc. Commercial law deals mainly with legal norms and institutions that refer to, or are connected with, the economic system as a whole. This is particularly true with the organization of economic operators in the market, and the corresponding functions of the State [3].

In order to harmonize their Energy Acts and regulations based thereon, with 'acquis communautaire', the Member States of the EU had to deal with radical changes in the energy sector. Not only were there changes when adopting additional regulations, but also in the relationships between market participants, new situations and, last but not least, in the ways of thinking. Energy has become like goods on the market, with specific demands, quality and price.

The European Parliament and the European Council in 'Directive 96/92 /EC Concerning Common Rules' set out the initial foundation for the liberalization of the energy market regarding Internal Markets in Electrical Power, and a related 'Directive 98/30/EC Concerning Natural Gas' [4].

'Directive 2003/55/EC Concerning Common Rules for the Internal Market in Natural Gas' has changed specific elements of 'Directive 98/30/EC'. This Directive defines public service obligations, introduces the definition of a system operator, defines regulated third party access to natural gas transmission systems, orders legal and functional unravelling of transmission system operations from vertically - integrated undertakings, expands the role of the regulator by setting methodologies, and approving prices for transport and distribution tariffs, and by setting or approving other regulatory acts for the establishment of a competitive natural gas market [5]. It also stated that by July 1st, 2004 the market would be opened for all customers except for households, who will become eligible customers on July 1st, 2007. This European process of market activity liberalization and the regulation of non-market ones, is rapidly continuing in the direction of preparing the security of a natural gas supply directive, and regulating the conditions for access to gas transmission networks.

If we restrict ourselves to Slovenia's National Energy Programme [6] it can be ascertained that the energy policy aims have two pillars of continual development – the reliability and competitiveness of

energy supply and the adverse environmental impacts of energy systems. In regard to these, the negative impacts of production, transport and use of energy have to be reduced to a minimum, and the development of energy-efficient programmes has to be promoted, as well as cooperative and coordinated action in order to enable future possibilities for development.

4 The supply of natural gas

The use of natural gas is simple when considering the fact that its influence on the formation of greenhouse gases is insignificant in comparison to fossil fuels. The expansion of new technologies has introduced natural gas, due to its high utilization rate and low investment costs, to compared electricity generation. Based on contemporary market trends, it is predicted that in the years 2020 to 2030, 40% of all electrical power in the EU will be produced from natural gas.

The Green Paper of the EU Towards European Strategy for Energy Supply emphasized three key points:

- The EU was becoming more and more dependant on imported energy. The consumption and purchase structure of natural gas in the EU [7] is given in table 1. According to predictions, the percentage of imported energy would rise from its current 50% to 70% by the year 2003.
- The emission of greenhouse gases is increasing rapidly. It is important to enforce the rules of the Kyoto Protocol.
- The EU has a very limited influence on import terms for the importation of energy [8].

Table 1: The consumption of natural gas in the EU (in milliard m^3)

	1997	2005	2020
The total of consumption of natural gas	330	418	478.5
The production of natural gas	198	209	137.5
The importation of natural gas needed	132	209	341

The consumption of natural gas in Europe from the OECD is predicted to increase by 2.1% a year in the years 2000 to 2030 and will increase from 482-milliard m^3 in 2001 to 901-milliard m^3 in 2030. The largest part of this increase in consumption will be due to the production of electrical power. The production of gas in the Member States of the EU (plus Norway) will remain stable at around 300-milliard m^3 until the year 2020 and will slightly decrease to 276-milliard m^3 in 2030.

Europe has always been a net importer of natural gas. Current dependence by the EU on importation is 40%, but will increase to 70% in the year 2020. The EU will become more dependant on the import of gas from Russia, Algeria and other potential sources. However, the EU, as a creator of the Gas Directive, does not have jurisdiction over Russia or Algeria, so the EU can only regulate its internal market for transport and purchasing, but not sources, which can lead to a distortion in the operation of the gas market, as well as an imbalance in the market, with all the resulting consequences. Scientists try to give warnings, because projects to enable new supplies of natural gas in Europe are already delayed and Europe could suffer severe consequences.

In Brussels, the problem of maintaining secure supplies and assuring enlarged supplies in the future is an important subject for discussion. The solution is viewed in two ways:

- The reliability of natural gas supplies to the consumers can be assured through obligatory stocks at national levels (similar to petroleum products)
- The assurance of enlarged needs for natural gas supply should make long-term contracts possible (which was, not long ago, seen as the main barrier to the development of a free market).

Finally, globalization of the energy market, as a whole, is the aim of opening up a natural gas market.

By conducting a policy of a freely competitive market, the Republic of Slovenia has adopted the initial provisions of European legislation. The basic law in the field of fair competition is the ‘Prevention of Restriction of Competition Act’ (1999), with which national legislation has been harmonised with the provisions of the EU. This Act supplements the ‘Protection of Competition Act’ (1993), which specifically regulates unfair competition, and dumped and subsidised imports. ‘The Prevention of Restriction of Competition Act’ prohibits restrictive agreements between companies, abuse of a dominant position, and restrictions on competition. It has to be emphasized that it is not the dominant position of a company in the market that is prohibited, but the abuse of that dominant position.

5 Opening of the internal energy market: progress so far

The entry into force of the two Directives (Directive 2003/54/EC concerning common rules for the internal electricity market and Directive 2003/55/EC concerning common rules for the internal gas market) will make the enlarged European Union the most integrated energy market in the world. These two directives represent a major step towards the completion of the internal market for electricity and gas. This package gave deadlines for the full opening of the market – 1st July 2004 for all business customers and 1st July 2007 for households. Equally it strengthened the independence of transport system operators from other activities (production and supply), through legal and operational unbundling of these activities [9].

This key legislation also contains a number of obligations for national regulators. They must monitor the development of competition, levels of investment and, where appropriate, the level of prices. This should lead to more transparency and give operators more ability to predict their evolution.

The Commission monitors the development of the market and will promote new initiatives, if necessary. Since 2001, the Commission has carried out a detailed evaluation of the situation in the electricity and gas sectors relating to market opening through the Benchmarking reports on the Implementation of the Internal Electricity and Gas Markets.

According to the Commission's annual report on the Implementation of the Gas and Electricity Internal market [10], the creation of the internal gas market requires more integration and for the efforts to diversify supply to be further intensified. Those Member States which are poorly integrated with their neighbours and have limited availability of external sources have had more difficulty in developing competition. A key problem at national level is that there is often only a single company bringing almost all the gas to the market. This has an important impact on the potential for competition at supply level. Even if there are several suppliers, competition between them may be rather ineffectual if they are all purchasing from the same wholesaler. This is the reason why in some countries the introduction of competition in electricity and gas market has been made more difficult by the existence of companies with an excessive degree of market power at national or regional level. Additionally, further development of the internal gas market has been constrained by the continued existence of long term reservations of transmission capacity. The lack of coherence between the charging structures of individual transmission system operators has also prevented competition in some areas. Therefore, gas markets remain subject to significant rigidities in many cases, usually as a result of the continuing lack of integration between national markets. Without cross-border competition, the existing incumbents can easily protect their position.

For the time being, import capacity into the EU would appear to be more than adequate to serve demand. As long as capacity is available, there are already strong incentives for producing countries and EU suppliers to conclude contracts to serve increasing gas demand. Europe is currently creating a wide energy community, going well beyond the borders of the Union based on common rules and practices. Member States need to maintain their commitment to this objective in the decisions they make regarding the implementation of the Directives – by doing this, a competitive and secure market can be achieved [10].

A lot remains to be done to ensure that Europe has an effective and competitive energy market. The role of independent regulators remains a crucial component of the introduction of competition and their decisions relating to network tariffs and other important market rules will continue to shape the development of the market. It is also crucial that Member States transpose as soon as possible necessary legislation to implement the Directives. However, this Community legislation is only the framework that makes competition possible – further efforts must also be made to tackle the question of national dominant positions of the traditional suppliers. [9] One thing that is certain is that in the new global environment of higher primary energy prices it is more important than ever for the Community to live up to its commitment to a competitive market.

6 Environmental protection

One of the basic issues that every state policy has to deal with is how to reduce the enormous consequences of man’s activities affecting the environment, how much time it takes to recover from damage, and to eliminate hazards to the lives and health of the public.

In the year 1992, the Conference in Rio de Janeiro, the so-called ‘Moment of truth’, revealed the causes of global climate change. A new doctrine as a measurement of progress was adopted -

'Development balanced with the environment!' As a programme for achieving development aims, the Rio Declaration and Agenda 21 were also adopted – as a framework for activities to create a balance with development. The message was clear: recognizing the importance of greater environmental protection.

EU Member States also signed-up to the Kyoto Protocol within the United Nations Framework Convention on Climate Change (UNFCCC), in the year 1992. The aims of the Protocol are to reduce gas emission between the years 2008 to 2012 by approximately 5.2%, and to reduce the emission of greenhouse gases by 8%. The EU performs its responsibilities and obligations for the reduction of emission of greenhouse gases by improving efficiency in all energy sectors. The programme is designed in an action plan, [11] where quantitative aims are presented.

In addition, other objectives of the Protocol have to be pursued:

- Improvement in the efficient use of energy by at least 10 – 15 % by the year 2010 (in comparison to 2004) in the industrial and service sectors, and improve the use of energy in buildings, public sectors and transport by 10% (in comparison to 2004);
- Double the share of energy from cogeneration plants from 800 GWh, in the year 2000, to 1,600 GWh in 2010.

The EU adopted a document [12], which presents the directions for a more significant influence and visibility of the efficient use of energy when aiming at a more coherent regional development. In Slovenia, a study was made, that includes municipalities when decisions about sistematical regulation of environmental friendly energy supply are reached [13].

If we discuss the legal system, laws protecting nature and the environment work as an adequate subsystem, which has to have an umbrella Act with general norms, in order to regulate environmental protection. The laws in this area have two tasks: to try to be efficient and to be able to regulate between competitive interests.

'The Environment Protection Act' is organized according to the principles of: integrity, cooperation, prevention, the responsibility of the person creating the burden, the payment of compensation by the responsible person, compulsory insurance, compulsory subsidiary action, publicity and environmental protection.

Implementation of the 'Environment Protection Act' is subject to the establishment of an Environmental Protection Development Fund, which is legally and a governmentally- independent institution, non-profitable, and under the supervision of state policy. The task and organisation of the Fund have to cover the areas of air pollution reduction, gradual elimination of those substances causing a thinning of the ozone layer, the development of public utility infrastructure, and the reduction of industrial pollution.

The central aim of the European Commission's energy policy is the development of renewable energy, because it has an important role in reducing Carbon Dioxide emissions, which is a major Community objective. Increasing the share of renewable energy in the energy balance also enhances sustainability and it helps to improve the security of energy supply by reducing the Community's growing dependence on imported energy sources. Renewable energy sources are expected to be economically competitive with conventional energy sources in the medium to long term.

7 Conclusion

The technical progress of countries is a result of close co-operation between science and production, and represents all the changes that are due to an improvement in the means of labour, the labour force, and the energy sources to manufacture new products, use of alternative energy sources, new production methods and organisation methods. With all this, national legislation has to be harmonized with 'acquis communautaire'. EU legislation and the steps needed to ensure full implementation of the 'acquis' have to be outlined.

Implementation of the new Energy Act in Slovenia and, consequently, the appearance of a deregulated market have stimulated new market players, such as sellers, a stock exchange, and consumers. The deregulated market requires and determines the interactions, tasks and duties of the above-mentioned market players.

The aim of EU policy is to encourage effective operation of internal markets, in general, and the internal energy market, in particular, while encouraging rational production, distribution and utilisation of energy resources and the development and utilization of renewable energy resources, so as to reduce the cost of energy to the consumer and contribute to the diversification of energy sources.

However, the new common market in the EU is still developing. An increase in downward pressure on prices and the displacement of reliability from the final market to the producer could result in an imbalance between supply and demand in the natural gas market, especially if the contracts for supplying natural gas are short-term. Additionally, the use of alternative and renewable energy sources has to be taken into consideration, even though the economic viability, in most cases, is questionable. Nevertheless, due to the reduced pollution of the environment, together with suitable stimulation and subventions and, because of the fact that a reduction in the emission of flue gases is more than necessary, the plan has to be realized in the near future in order to preserve and improve our natural environment.

References:

[1] European Commission, Directive 2003/55/EC of the European Parliament and of the Council Concerning Common Rules for the Internal Market in Natural Gas and Repealing Directive 98/30/EC, *Official Journal L 204*, June 26, 2003

[2] Dr. M. Kostic, Rad, snaga i energija, Illinois University, USA, KGH; November, 2004

[3] Ivanjko, S., Kocbek, M: *Korporacijsko pravo*, GV Zalozba, Ljubljana 2003

[4] European Commission, Directive 98/30/EC of the European Parliament and of the Council Concerning Common Rules for the Internal Market in Natural Gas, *Official Journal L 176*, June 22, 1998

[5] European Commission, Energy infrastructures: Increasing Security of Supply in the Union, Brussels, Belgium, December 2003

[6] Energetski zakon, Uradni list Republike Slovenije, št. 79, November, 1999

[7] Commission Staff Working Paper, Second benchmarking report EU, Brussels, 2002

[8] European Commission, Directive 2002/91/EC on the Energy Performance of Buildings (2002/91/EC), *Official Journal of the European Communities*, N L 1, January 4, 2003

[9] European Commission, Directorate general for Energy and Transport: Towards a competitive and regulated European electricity and gas market, 2005, http://europa.eu.int/comm/energy/electricity/index_en.html

[10] European Commission, Annual report on the Implementation of the gas and electricity internal market, Brussels, 05.01.2005

[11] Action plan to Improve Energy Efficiency in the European Community, COM, 2000

[12] Energy Efficiency in the European Community – Towards a strategy for the Rational use of Energy, COM, 1998

[13] Demand Side Management in the Electricity & Gas Distribution Sectors of Slovenia, Draft Final Report, October, 2000, Program PHARE (SRC Int. – Denmark, Exergia – Greek, ETSU – Great Britain, Institute Jožef Štefan - Slovenija