

New Directives and their First Years of Implementation in EU Electricity Market

TINA KROPE¹, MARKO SENČAR², JURIJ KROPE³

¹LL.M. student at University College London, Faculty of Laws
Bentham House, Endsleigh Gardens
London WC1H 0EG
UNITED KINGDOM

²Energy Agency of the Republic of Slovenia
Strossmayerjeva 30, 2000 Maribor, Slovenia

³Faculty of Chemistry and Chemical Engineering
University of Maribor
Smetanova ul. 17, 2000 Maribor, Slovenia

Abstract: The process of electricity market liberalization and its functioning in the EU is discussed in the paper, as well as some side-effects, deficient national energy supply strategies and non-homogeneous development throughout the EU member states. Particularly the first years of the market developments have shown differenced among the member states and the roles of the energy regulatory authorities. Some developmental priorities to ensure security of supply, and mechanisms to support preferential electricity production from some promising energy transformation technologies are discussed.

Key words: Energy, electricity market, electricity market liberalization, regulatory authority, electricity networks, preferential producers, electricity supply, electricity prices

1 Introduction

Through introduction of free movement of goods and services in the energy field by the Directive 96/92/EC [1], the electricity market started to liberalize at different pace over the EU. The most important consequences of its enforcement were unbundling of activities, introduction of network service regulation by regulatory authorities, and market orientation due to customer choice as well as non-discriminatory network access. The market was strongly enhanced by the second directive 2003/54/EC [2] EC on common rules for the electricity market, which provides for a full market opening at latest by mid 2007, and the regulation 1228/2003 on access to the electricity transmission network. They both require regulated network access and regulatory authorities in all member states, to regulate network charges and correspondent pricing methodologies. The internal market has not reached the maturity due to several reasons, among them limited capacities in cross border transmission paths. Therefore price zones appeared and the market was, and it remained to a large extent until present, split into several zones with their own characteristics. Since energy trading is separated from physical energy flows,

insufficient transmission capacities at certain bottlenecks represent a justified limitation to the market.

Secure supplies at stable affordable prices and reliability as well as availability of energy gains public interest and political impetus. Developments over the past five years were characterized by continuously growing demand for energy, and unpredictable consequences of the market liberalization, competition and their impact on security of supply.

Parallel to full market opening in 2007, some common goals have to be developed at the community level as well as at the level of member states. In addition to market functioning, they are expected to include additional mechanisms such as protection of vulnerable customers, ensuring quality of supply, environmental impacts and infrastructure investments. Since the market only provides insufficient and delayed signals for infrastructure investments, one of the most important issues was and remains the generation part of the supply chain, which after market liberalization became much more exposed to risks.

2 Energy policy

The global economy influences the energy prices by pressing them closer to the cost levels, apart from oil price, which since 2005 has reflected also some political instability in the producing regions, as well as management and mitigation of increasing risks. Strategic and political impacts to the process of price formation are remarkable. Price response is a result of various factors and differs for different types of energy.

The world primary energy demand is projected to continuously grow [8], as it shows Figure 1.

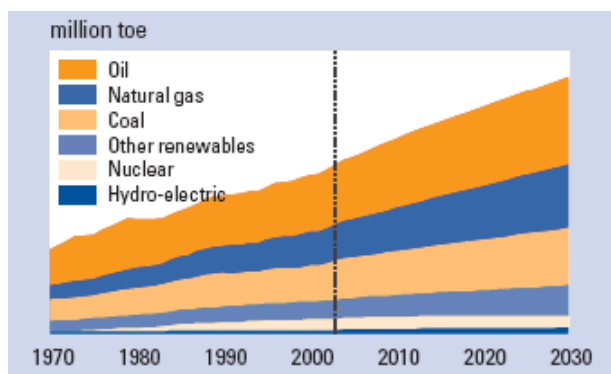


Figure 1: World Primary Energy Demand

In the European Union, the main energy policy goals are followed, namely:

- environmental and health sustainability,
- international competitiveness of the national economies, including energy industry,
- strategic security of supply, and
- social and political cohesion,

whereby the appropriate balance is difficult to obtain.

Moreover, the states as well as the undertakings are bound to the orientations and limitations, resulting from the European legal framework, namely the rules on the internal market, competition law, monitoring of subsidies and environmental goals. The EU energy acquis does not foresee any formal national energy policy, strategy or programme. But the first years of market functioning have shown the importance of the converging actions at both, national and EU level. As a result, at EU level the Green paper on Strategy for Sustainable, Competitive and Secure Energy was published in 2006, to form the basis for a common energy policy, for the first time, based upon the market principles.

3 Electricity market liberalization

The process of energy market liberalization is a part of the development in global dimension, not only EU, and is a consequence of economic movements [3]. The declared main goals of liberalization were increased competitiveness in the market, decrease or at least stabilize electricity prices at relatively low levels, and improvement of services. However, the restructuring of electric power systems in some member states led from state monopolies to regional oligopolies in several member states. These are subject of particular control and reporting, including reporting on the elements of competition, such as possible anti-competitive behaviour or possible abuses of market power.

The result of the first years of market functioning, at different degrees of market opening and different market design throughout the member states, the most obvious consequence was decreased investment activity and large price variations in different price zones. Furthermore, the price volatility increased which led to requirement to push for the market harmonization and transparency. A particular milestone on the roadmap to transparency was a Commission requirement for reporting, specifying the minimal contents, subject to annual reporting to the European Commission. This led to a substantial increase in transparency and comparability of the reports on the market, which is also reflected in the last Commission report on electricity market implementation, the fourth benchmarking report on the 2004 [4].

4 Electricity market functioning

Electricity market in the EU has developed country and region specifics. The roles of the main market participants are presented in the Figure 2.

In several markets exchanges and market operators appeared separated from TSOs, among them Slovenia. In the first years of directive implementation, when the market was relatively active, and most of the participants established their strategic positions, after which the volumes traded at the exchanges mostly decrease. The regulatory authorities monitor the market against possible anti-competitive behaviour or abuses, but the exchanges and related activities are not monitored by energy regulators.

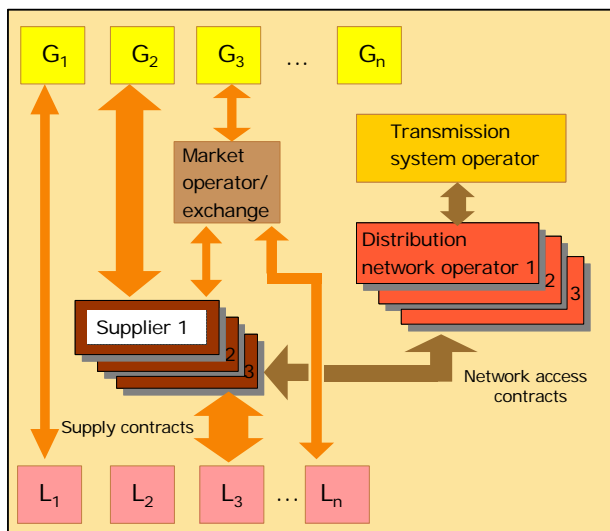


Figure 2: The contractual relations and financial flows

Prices of energy, fuels and related services can be defined generally in four ways, depending on the type of fuel, market or use of networks, as in the Slovenian example, shown in the Table 1.

Table 1: Prices in the energy field, [5]

	Limitation of the maximal price	Limitation of the minimal price	Regulated price	Market price
Cause for the type of price setting	Monopoly	Kyoto, internalization of external costs	Natural monopoly, electricity and gas networks	Existence of energy market
Responsible authority/ market	Ministry, responsible for the economy	Ministry, responsible for the environment, and economy	Energy Agency (regulatory authority)	Supply and demand
Subject to price setting	petrol, electricity for tariff customers	Wind and solar energy, small hydro, cogeneration	Use of electricity and gas networks	LPG, Electricity for eligible customers, Electricity at the exchange (Borzen)

The role of the regulatory authorities in particularly the first few years of the market functioning was to establish a smooth transition from administrative electricity price setting to network price regulation, whereby the energy as commodity is traded at the market. As a result of the first years heterogeneous development, some serious market distortions are observed in the EU energy market, [9], such as vertical foreclosure and

dominant positions, which are, as a rule, not abused, but still damp some market dynamic.

5 Special regimes in the market

A possible shortcoming in energy supply could result in a shortage in electricity supply with considerable economic and social consequences. Therefore some deviations from a theoretical market are acceptable, especially those which support the use of promising new technologies and reduction of environmental impacts. The use of renewable sources is widely understood as a possible and preferred way to achieve several policy targets. It is in line with the EU directive on renewable sources [6] and the green paper on energy strategy [7]. Nevertheless, as the renewable sources in use are predominantly indigenous, their use may strengthen the local economic effects as well as the security of supply. Preferential use of renewables is compatible with the market, as shown in [3]. Under the conditions of increasing electricity prices as in 2005 and apparently in 2006, the prices of preferential generation, which uses highly efficient technologies and/or renewable energy sources, the initially market distorting support mechanisms gradually loose their distorsive effect.

That's why the preferential (sometimes also called qualified) generation is an important element of sustainable development in energy field.

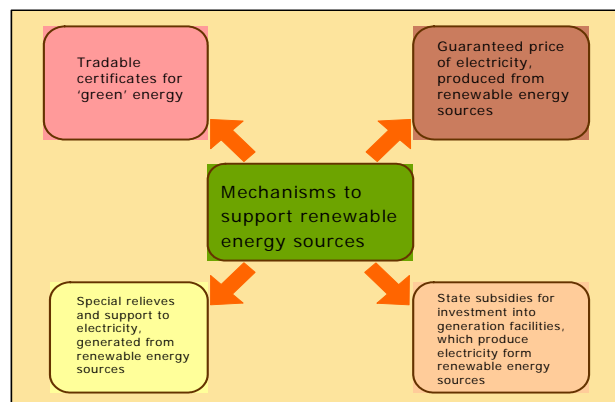


Figure 3: Support mechanisms for renewable energy sources

The roles of the regulatory authorities with respect to electricity generation vary strongly among the EU. In some cases, the regulator is directly or indirectly involved in generation and may impose environmental aspects or criteria, for example through licensing requirements. In other

member states, e.g. Slovenia, the regulator is not involved in generation. However, it indirectly supports the use of renewable sources by, for example, issuing RECS certificates. Particularly the development over the first years of the market have paved the way for inhomogeneous support.

6 Conclusions

From the analysis, described above, we conclude:

- Permanent severe conditions and shortages in electricity supplies are not expected within a decade, experiences show that long term efficient energy strategies include support and usage of promising technologies and the use of renewable energy sources, which are subject to various support instruments and subsidies, justified to enable achieving the targets of the EU directive [6], Kyoto protocol and diversification of sources [7], with minimal market distortions. Obstacles, legal and institutional, to use RES will have to be removed and innovation widely welcomed.
- Market distortions were observed as a result of the first years heterogeneous development. However, some of them reflect regional or national specifics, and other the support of particular energy sources or technologies. A guide on the regulators to homogenize the support to RES may make it more efficient.
- Liberalization of electricity market in Europe has brought some positive effects after its introduction, including competition and price decreases, which supported the competitiveness in the EU. However, after the first years, the price increases have already prevailed and price level projections show continuous rise. The legal and regulatory frameworks, it seems, are to be amended to overcome the side effects of the markets. Particularly at the generation side, a strict monitoring is required to ban possible anti-competitive behaviour.
- The regulatory authorities regulate network prices and quality of public services. Their market monitoring and reporting will continue to play a decisive role in investors' trust.
- The role of regulators will remain indispensable for implementation of energy policies and energy markets. Its particular importance is contributing to a trustworthy investment friendly economic environment.
- It is expected that short- and long-term energy policy will include energy price controls in various forms. Regulation of network prices will

remain in long-term, and some limitation in energy and fuel prices for households in short-term will remain valid.

- Global competition for primary energy sources in long term and import dependence will influence today's and the future energy policies, as well as the future development of Europe.

References

- [1] 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, *Official Journal of the European Communities*, L 027, 1997
- [2] 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, *Official Journal of the European Union*, L 176/57, 2003
- [3] Kroppe T., Kroppe J., Goričanec D. Liberalisation of the internal energy market and environmental protection in the aspect of European legislation, *WSEAS transactions on environment and development*, Nov. 2005, vol. 1, iss. 2, pp. 265-271.
- [4] Fourth benchmarking report: Annual Report on the Implementation of the Gas and Electricity Internal Market, Communication from the Commission, COM(2004) 863, {SEC(2004) 1720}, 5/01/2005, Technical Annexes
- [5] N. Horvatin, A. Šaver, A. Bratkovič, M. Švigelj, Responsibility for price regulation in conditions of liberalisation of energy market, *VI SDDE*, Portorož 2003, pp. 41 – 48
- [6] Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, *EN Official Journal of the European Communities* 27. 10. 2001, L 283/33
- [7] Green paper: A European Strategy for Sustainable, Competitive and Secure Energy, COM(2006) 105 final, {SEC(2006) 317}, 8. March 2006, Brussels
- [8] WEC: *World energy prospects to 2030*, The World Energy Book, Issue 1, 2005
- [9] Energy Sector Inquiry Draft Preliminary Report, non-confidential version, European Commission, DG Competition, Brussels, 16. February 2006