

Duško Radulović*

UDK 339.138:332.142.6(497.5)
JEL Classification F18, M3, Q5
Pregledni članak

ENERGY COMPANIES WITHIN THE PROCESS OF THE ENERGY MARKET LIBERALIZATION

Transformations of the energy market represent a challenge and a reality for every energy company around the world. This paper analyzes the influence of the energy market liberalization upon energy companies' business strategies and extends to customer relationship. The analysis is based on various scientific literature, gathered mostly from authors that examine the European energy liberalization process, the emissions trading scheme and the energy companies' marketing activities, with the aim to explore the liberalizing Croatian energy market. The produced results suggest that the energy liberalization process determines the quality relationship between energy companies and its customers. Accordingly, the conclusions of this paper suggest that energy companies should develop stronger customer relationships through marketing activities and effective communication in order to facilitate the transformation process and retain an energy market share.

Key words: energy market, liberalization, transformation, marketing, environment

1. Introduction

Energy is essential for the existence of a modern society. Nowadays, all countries in the world are faced with challenges brought about by climate changes, dependence on energy resources and growth of energy prices. Moreover, the

* D. Radulović, Msc., Energo, Marketing Department, Head (E-mail: dusko.radulovic@energo.hr) First version of the paper received on April 21st, the final one received on Sept. 23 2009.

energy interdependence is increasing rapidly, and the energy power failure in one country has immediate effects in others. The prices of energy, according to the surveyed literature (Barbu, 2006.), are determined by various factors. In a perfectly liberalized market the price of energy would be the result of matching supply and demand, but perfect markets do not exist in practice. Different types of distortions are seen in the liberalized European energy market, and therefore the prices of energy remain the major uncertainty in the investment decision process, especially for developers of green energy projects. The energy market liberalization process should develop strong and flexible markets where competence and effective regulation could provide fair energy prices for the customers (European Commission, 2007.a).

In the marketing literature there is extensive research dedicated to customer relations (Kotler, 2006., Churchill and Peter, 1994., Wieringa and Verhoef, 2007.). Furthermore, transformations create crises situations within the energy market that stimulate the energy companies to use marketing activities and different communication techniques upon their customers. Effective communication between the energy companies and its customers is a necessity to overpass the extensive transformation process, and it can be done with marketing activities, focusing on environmental issues and strong customer relationship. As a result of the impact of energy production on the global pollution, and the recently developed Emissions Trading Scheme, the priority issue of energy companies is the boosting of renewable energy development and energetic efficiency, of which the energy economy literature has been writing extensively (Dahl, 2008., Rajan, 2002., Duke and Kammen, 1999., Polo and Scarpa, 2003.).

Besides the examination of the European energy market transformations, further research and conclusions were made through the survey of the Croatian energy market liberalization and the adjustment of its energy companies to the ongoing transformation process. Accordingly, research conclusions indicate that poor communication between energy companies and customers can become an obstacle in the transformation process, which can stop further market development. The purpose and the aim of the research are closely connected and they concentrate on energy companies' business strategies in the energy market transformation process. Therefore, the energy companies' communications skills and their customers' relation represent a necessity in order to facilitate the above mentioned process. The business strategy literature (Kourdi, 2007.), combined with the model of the New Energy market, provides additional insight into how transformations influence the energy companies' business. Furthermore, environmental measures and the implementation of the emissions trading are examined to determine their connection with the energy market liberalization. These factors were taken into account in the interdependence analysis and will be carried out by testing the following hypothesis: marketing activities oriented on a strong cus-

tomer relationship, together with the green technology and the emissions trading, define the energy companies' business success and their adjustment to the energy market liberalization process.

The subsequent sections of this paper are organized as follows: the second section discusses the influence of energy on the global environment and emissions trading; the section afterwards brings research of the energy market liberalization process; the fourth section brings the analysis of the marketing activities in energy companies. The concluding section summarizes the research results and states the paper's conclusions.

2. The importance of the energy economy

Global energy demands represent a challenge for the low emissions energy production and safe energy supply. Below the analysis of the impact of the energy on the environment will be outlined together with the analysis of the Emissions Trade Scheme results.

2.1. Energy impact on the environment

Countries around the world have demonstrated their readiness to tackle climate change, to face up to the challenge of secure, sustainable and competitive energy, and to develop the world's economy on sustainable basis. Extensive literature provides conclusions that the process of trade liberalization in the energy sector started with people's awareness of climate change (Carvalho and Hammerlund, 2007.). Environmental issues were displayed internationally in 1997, after the United Nations convention in Kyoto, Japan. That year the Kyoto protocol was produced for worldwide ratification with aim to control and diminish the green house gas (GHG) emissions into the atmosphere. Finally in 2005, after Russia's ratification, the Kyoto protocol became a legally active document.

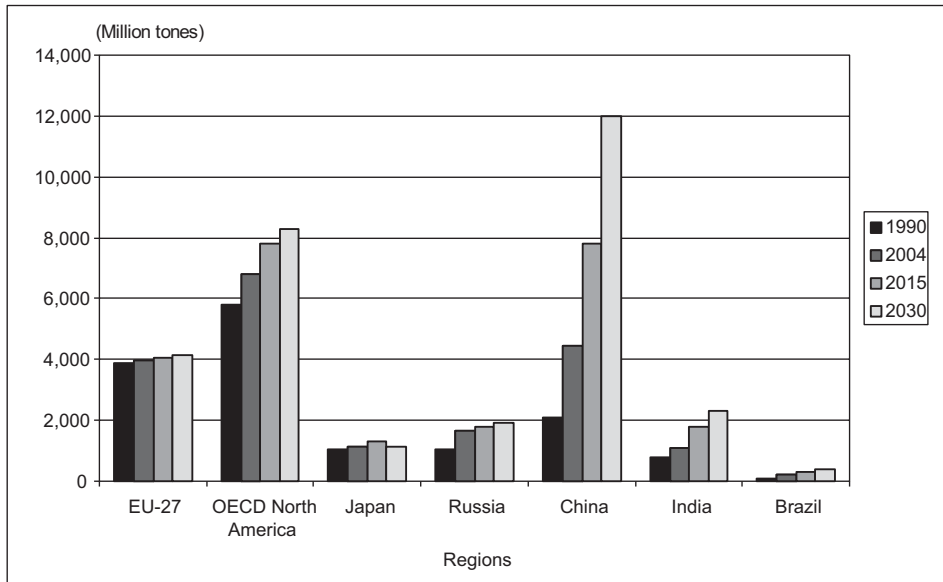
Although there have been extensive debates and much research has been done on the subject, there is still no internationally accepted solution that would indicate how future GHG emission measures should look like and how these measures will relate on the energy sector and the global economy (McKinsey & Company, 2005.). As the global demand for energy will continue to grow over the next decade, and as markets become more open and competitive, the role of the energy services will continue to increase. The international supply will be particu-

larly important in the oil and gas exploration, power generation, energy trading and marketing, and transportation and transmission networks (Evans, 2002.).

The latest research and statistics of the world energy consumption show that the needs for energy will grow rapidly (Pokrovac, 2007.). The data presented in Figure 1 indicates a significant correlation between the future growth of CO₂ emissions in the world, and the industrial and economic regional development, which is equivalent to the growth of energy demand. The most significant sources of CO₂ emissions, in most countries, are the processes of fossil fuel combustion for electricity and/or heat production, transport and industrial processes of cement and ammonia production (Hublin, 2007.).

Figure 1:

FUTURE CO₂ EMISSIONS BY REGION, 1990-2030
(IEA REFERENCE SCENARIO)



Source: Carvalho, G., Hammarlund, C. (2007). 'After Kyoto', In *BEPA Monthly Brief – Issue 1*, from World Energy Outlook, 2006 in OECD/IEA 2006.

At the same time, extraordinary challenges occurred in the global energy market with oil and gas prices volatility. Furthermore, the political influence of

Russia's gas export to European countries and the Ukraine proved how the energy impact can make the European economy and its political establishment vulnerable. This constant threat to the European energy market's stability, urged decisions to concentrate investments on the renewable energy, such as wind power, solar energy and bio-mass. Extensive efforts and new legislation are directed to the energy efficiency and energy diversification, in order to decrease the European dependency on fossil fuels (Belkin, 2008.). An important point in the correlation between the economic development and the growth of CO₂ emissions is the implication of drastic measures to be taken globally in order to decrease environmental pollution. Thus, new investments into the energy technology must be undertaken to satisfy the energy needs and safety of global sustainable development.

The Republic of Croatia ratified the Kyoto Protocol in April 2007. According to the Kyoto Protocol, Croatia has the obligation to reduce the emissions of greenhouse gases by 5 % in the period from 2008 to 2012, in relation to the base year of 1990 (Vešligaj and Hublin, 2005.). Table 1 illustrates the CO₂ emissions of the Croatian energy sector. These emissions represent the majority in Croatia's total CO₂ emission, and derive mostly from fuel combustion.

Table 1:

THE CO₂ EMISSIONS BY THE ENERGY SECTOR IN CROATIA FROM
 1990-2005 (IN THOUSAND METRIC TONS)

Year	1990	1995	2000	2001	2002	2003	2004	2005
Energy CO ₂ emissions	20 945	15 540	17 888	18 814	19 939	21 334	20 758	21 107

Source: Hublin, A. et. al (2007). "National Inventory Report 2007", Republic of Croatia, Ministry of Environmental Protection, Physical Planning and Construction, October, Zagreb, p.17.

According to the Croatian Annual Energy Report for the year 2007 (Republic of Croatia, 2008.), the preliminary results of CO₂ emissions from the energy sector amounted to over 21 million tons of CO₂, mostly emitted from the energy production and transformation plants. The presented data and other sources (Vešligaj and Hublin, 2005., Republic of Croatia, 2006.) lead to the conclusion that the production of energy in Croatia did not follow the global or national economic growth. The latter can be explained with an overall decline of economic activities and energy consumption in the period 1991-1995, which was mostly the consequence of the war in Croatia, and the subsequent decline in the total emissions of green-

house gases in that period. Emissions began to increase in the period 1996-2005, by 2 to 3 % per year, due to the revitalization of previously developed economy, which brings us to the conclusion that Croatia will hardly be able to achieve the GHG emissions stabilization on the level of the base year 1990 and the Kyoto target (Stanić, 2007.).

2.2. Energy sector and green house gas emissions trading

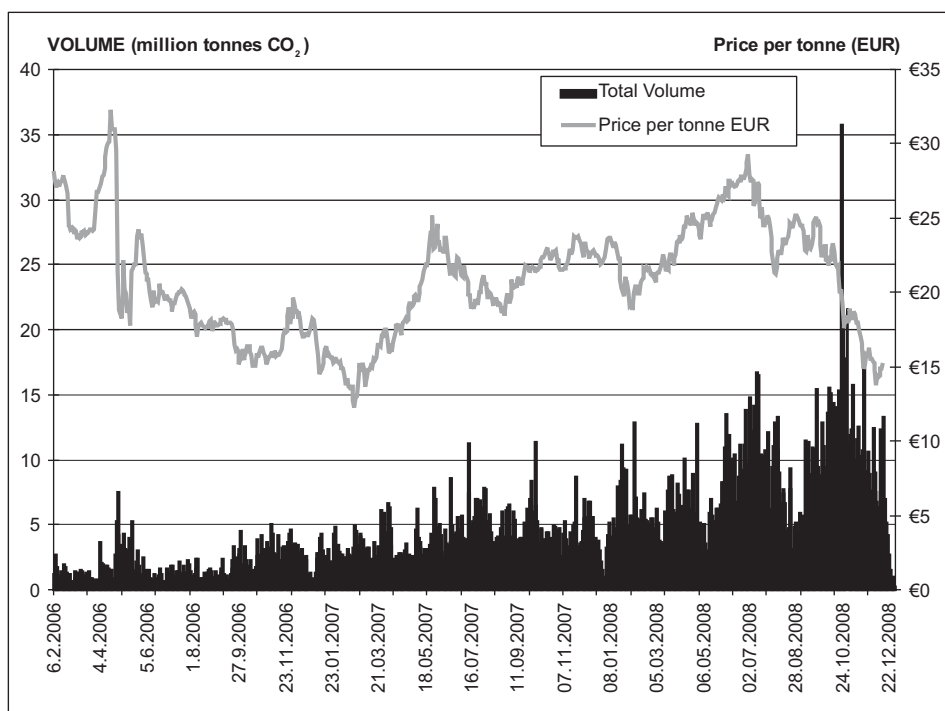
Further literature analysis (Stanić, 2007.) classifies that the GHG emission trading is a concept that minimizes the cost of environmental target achievement. Ecological goals concentrate on the global environmental burden and the local emissions are just pieces of the puzzle. Emissions trading produce minimum costs to the global greenhouse gas emissions reduction, because the participants have different marginal costs of reducing emissions, which allows them to transfer benefits from the category of a smaller marginal cost into the area of higher marginal costs. The world energy sector relates to the emissions more than 65 percent. In 25 European countries even 80 percent of all emissions come from energy conversion, mostly from electricity production and transport (Novak, 2008.). Such a situation represents a serious problem for the energy sector and calls for new sources that do not pollute the environment or have low emissions of green house gases. The relation between the energy and environmental protection is today an obstacle, but tomorrow it will become the motor of a new economy. Constant research and financial inputs in renewable energy sources (solar, wind and water power), energetic efficiency and other alternative methods of energy production will create a new energy market together with a new energy customer (Benthien, 2007.).

The above mentioned literature and other official documents (European Commission, 2007.b) indicate that energy companies, industrial associations and governments all rank topics such as emission reduction targets, allocation rules, and rules for new entrants and closures, as the most important topics concerning the EU Emission Trading Scheme. These topics all relate to long-term uncertainty, while energy companies and associations seek clarity and long-term stability regarding rules, and over longer periods. The European Commission presented the climate and energy package as an instrument for the implementation of ambitious targets till 2020, i.e. reduction of GHG emissions for 20%, as well as a 20% share of renewable sources in the overall energy supply, combined with a 20% improvement of the energy efficiency. At the same time the Emission Trading Scheme (ETS) seems to speed up. The Emissions Trade Report of the European Climate

Exchange¹ implicates a constant trade volume growth. The underlying commodities being traded at ECX are the EU allowances (EUAs), issued under the EU Emissions Trading Scheme, and one EUA equals one ton of CO₂. The ECX also added Certified Emission Reduction Units (CERs) as another underlying commodity. The Futures contracts, or simply Futures, are exchange traded derivatives. A Futures contract is a standardized contract to buy or sell. The Certified Emission Reduction Futures contract gives the holder the right and the obligation to buy or sell a certain amount of a certain underlying instrument at a certain date in the future, at a pre-set price. The ECX's yearly report on volume and price presented in Figure 2 indicates constant growth in the volume of trade of EU allowances (EUAs) through several years. The presented data demonstrates the inelastic demand where Futures price usually do not follow the volume growth.

Figure 2:

ECX CFI FUTURES CONTRACTS VOLUME AND PRICE



Source: ECX (2008). *Emissions trade report*, <http://www.ecx.eu>, December, 2008.

¹ ECX (2008). *Emissions trade report*, <http://www.ecx.eu>, December, 2008.

The ECX's trade report presented in Figure 2 indicates that the annual volume growth is at the same time significant for the emission trade as a new and fast developing branch of world economy. Thus, in the near future the Emissions trading will take place in the business strategy of every larger energy producer (Koster, 2007.). Trade is an important channel for the diffusion of climate mitigation goods. Lowering trade barriers and bringing their prices closer to world market prices, making them more affordable to consumers (industry and households), would in the overall bring down climate mitigation costs². Although the mentioned changes create certain problems to the energy sector, the major challenge is the process of liberalization of the energy market. Substantial analysis of the Emission Trading Scheme (McKinsey and Company, 2005.) indicates that there is uncertainty about the long-term development, seen as the largest obstacle to liquidity in the CO₂ emissions market. Therefore, some companies fear that emission reduction efforts could be sanctioned by possible changes in the next allocation plan, so they refrain from reducing emissions in the current period.

The Republic of Croatia has not yet started with emissions trading according to the European Emissions Trading Scheme. Reasons for such an inactivity could be found in the fact that Croatia is not yet a EU member, but the true reason is the inability of the energy sector to be competitive in the European market³. Some of the consulted literature (Novak, 2008., Republic of Croatia, 2006. and 2008., Hublin, 2007.) classifies that the administrative and legislative preparations on emissions trading have been done or are expected to be implemented together with the National Allocation Plan, which has not yet been made public. Meanwhile, it seems that the published National reports and communications (Republic of Croatia, 2008 and 2006.) failed to explore and explain the involvement of Croatian energy companies and their future obligations. The national reports and communications towards the energy companies are more oriented towards global and theoretical issues, making this situation an irrelevant problem for them, as well as for their customers, which is completely inappropriate for the global situation.

Furthermore, it must be underlined that the Emission Trading Scheme represents an important issue in the energy market liberalization process where the internal energy market could stimulate fair and competitive energy prices and energy savings, as well as higher investments (European Commission, 2007.a). However, full conditions to achieve this goal do not yet exist. This prevents the European economy from receiving full benefits from the energy liberalization through boosting investments in energy efficiency and renewable energy.

² International centre for trade and sustainable development (2008). "Liberalization of trade in Environmental goods for climate change mitigation", *Trade and climate change seminar*, June, Copenhagen.

³ <http://www.energetika-net.hr/ekologija/vijesti/5271>

3. The liberalization process in energy companies

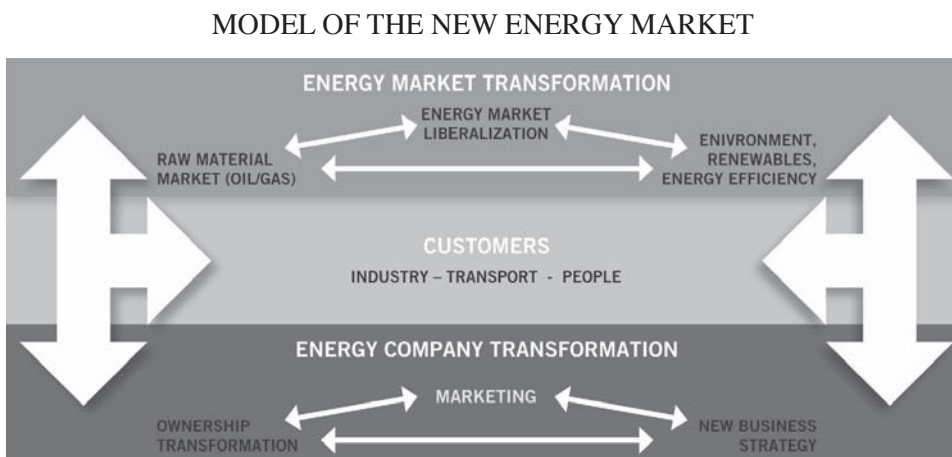
Privatization and liberalization create incentives for outsourcing services on a competitive basis. As energy trading increases and markets become more liberal, more innovative pricing options and financial instruments are being developed to manage price risks over time. Together the structural changes increased the international role of energy services to support competitive markets of oil, gas, electricity and other energy products (Dahl, 2008.). Furthermore, some authors (Kigallon and Lampe, 2007.) suggest that the implication of simultaneous process development, for the whole transformational initiative, should be condensed in few years. To be ahead of the game and to create a differential advantage in the industry, companies must now consider massive parallel multi-initiative changes. This type of transformation must be embedded in the infrastructure of the company and will inevitably encompass organizational issues within most areas of the business from R&D, through production, to sales and marketing. The global transformation in the energy market takes into consideration the fact that countries around the world face constant transformations as regards the lack of energy resources (oil and gas), geo-political influences, market liberalization and other business situations (mergers and acquisitions, energy market concentration). Also, new environmental movements have created legislation and trading system for GHG emissions, moving toward the renewable energy sources and the energy efficiency. The emissions trading regime for Europe, according to some literature (Muir, 2002.) will conform to energy liberalization and will become subject to energy markets, particularly with respect to the upstream energy sector and electricity generation.

The success of a company's adjustment to transformation depends on the strength of its management and its business strategy. There are many challenges to be faced during the liberalization period, but solutions have to go beyond all that was done before, and creativity and innovation have to mark new business strategies (Kourdi, 2007.). Some sources (Grbac, 2005.) indicate that companies usually concentrate on sales efforts to create added value of their service, targeting customers and local society in the area where they operate. Over the last month several questions were asked worldwide: is world economy capable to survive this energy – ecology crises? Is situation now mature for a dramatic change in the energy market? How to overpass boundaries and develop the basis of the new energy market? The right answers to these questions can hardly be given in this turbulent period. Generally, this study reveals the answers that represent the core of this paper's hypothesis. Accordingly, the function of market activities in the energy business could represent the bridge over two parallel energy worlds. As in the energy economy literature (Višković, 2008.), this paper reveals the relationship between one world that is slowly, but definitely, disappearing

while in the meantime bringing to the surface political interests of the world's most powerful countries that control the oil and gas resources. The other option uses science and modern technology to develop renewable sources of energy and energy efficiency. At the same time this new approach is trying to alleviate all the social and environment crises created by the overexploitation of fossil fuels, combined with human estrangement from nature. In the new energy market the customer is, for the first time, in the focus and he/she can choose between several energy companies in an open market, and decide whose gas or electricity to buy. Additional literature (Ilie, 2007., Bazart, 2003.) indicates that the liberalization of the energy market is a long process and its overall aim is to increase efficiency through competition. Greater efficiency leads to lower costs and prices, which improves competitiveness that is crucial for energy companies competing in a global market.

During the research on global and local energy market liberalization (Duke and Kammen, 1999., Muir, 2002., Bazart, 2003., Višković, 2008.), the information gathered led to the conclusion that every energy company represents a significant factor in the energy market liberalization process. Furthermore, the transformation activities demonstrate how several business functions and other processes undertaken for the energy market liberalization create market transformations. The results of these researches derive the model of the New Energy Market, as shown in Figure 3.

Figure 3:



Source: Grbac, B. and Radulović, D. (2008). "New energy marketing", Environment, Ecosystem and Development, 6th International Conference, WSEAS, Cairo.

The model represents a correlation of three crucial factors: energy market, customers and energy companies, which simultaneously pass through several other transformations. The transformation of the energy market appears through the connectivity of the raw materials market, the ongoing process of the energy market liberalization and the increase of the environmental impact, which is combined with a higher demand for energy efficiency and renewable energy. The transformation engages also all customers of energy products and services. Global environmental awareness and constant demand for energy products and services entail a series of activities that have to be implemented in the form of environmental and social acceptability, which have to be met by every energy company. As the energy liberalization literature suggests (European Commission, 2007.a., Zyuzev, 2008.), the liberalization of markets followed by the separation of gas and electricity energy companies into separate companies for the production, distribution and supply (the Unbundling) creates market competition and allows customers the freedom to choose. The liberalization empowers the customers' market position and allows for an open market game between competitors. The process of liberalization also represents an opening of national gas and electricity markets to foreign competition. It also improves the security of supply by encouraging investments in facilities, in order to prevent interruptions of energy supply, and at the same time diversifying the transport routes and energy sources. The existence of a truly competitive energy market contributes also to sustainable development, notably by enabling suppliers of electricity from renewable energy sources to enter the market. According to literature (Ilie, 2007.), requirements set forth by European directives for electricity and gas can be summarised in as much market as possible, as little regulation as necessary and a price which will be determined by competition. To be successful in such a competitive environment, the energy companies have to improve their efficiency, and the regulatory framework should already anticipate this development.

Recent liberalization of the Croatian energy market caused several ongoing processes like privatization, regulation and competition that enforced transformation in the electricity, gas and district heating companies. The Republic of Croatia, as other Eastern European countries, had to develop an appropriate regulatory framework integrated by EU policies. According to HERA, the Croatian Energy Regulatory Agency⁴, in Croatia there are 39 local distributors of gas, mostly owned by national or local governments. Furthermore, the one and only Croatian gas transportation company operates as a public service, fully owned by the Republic of Croatia. The electricity generating facilities installed in Croatia, the hydro and thermal power plants (95% of the overall capacity) are owned by HEP Grupa, fully owned by the Republic of Croatia, while a small number of facilities (5% of

⁴ HERA, (2009). Energy market report, <http://www.hera.hr>, (May 2009)

the overall capacity) are privately owned power plants that use wind power, photo voltaic and small hydro power. The distribution and supply of electricity are provided only by HEP Grupa to Croatian customers, although there are a few other licensed traders. When we take into consideration other energy market literature (Stanić, 2007., Višković, 2008.), statistical data (Republic of Croatia, 2008.) and field research, certain doubts appear as to whether efficient Croatian energy market liberalization has yet been established. Although the legal framework for liberalisation exists in Croatia (Official Gazette, 2001.), when it comes to the matter of privatization, regulation of prices and energy market competition in Croatia, this research indicates an undeveloped market liberalization and a strictly government regulated market. In the following section the marketing activities in the energy companies will be discussed.

4. Analysis of marketing activities in the energy companies

Recent global oil and gas market instability, together with the ongoing energy liberalization process, have made the marketing activities important for every energy company. Marketing during the transformation brought out visions of renewable energy and energy efficiency that stimulate consumption of green technology, which will decrease carbon emission (Duke and Kammen, 1990.). This section analyzes the possibility of a wider role of marketing activities between energy companies and their customers in national and international energy markets. The question how to find and how to retain customers, is the greatest business challenge for every company. Constant political and business changes in the oil and gas exporting countries cause frequent global oscillations in the chain of raw material supply. The consulted literature (Gomez-Villalva, 2003.) suggests that global environmental awareness and strong society support for an emission free production regularly confront to energy demand growth.

The endorsement of EU environment and energy objectives represents a challenge for countries but also for all energy companies and their customers. Consequently, the energy companies together with a general strategy for transformation outline also the marketing activities to ensure the effectiveness of energy supply, energy efficiency and customer communication (Kamstra, 2003.). The liberalization of the energy market determines certain basic principles of free trade and competition for each customer. Also, obviously, the role of marketing in the energy market liberalization connects energy companies with customers by encouraging mutual communication and promotional activities that will help customers to overpass the changes and gain benefits brought by the energy liberalization process. Another source (European Commission, 2007.a) suggests that the

creation of a genuine internal market for energy is one of EU's priority objectives. The existence of a competitive internal energy market is a strategic instrument that allows European customers to choose gas and electricity supply between different energy companies. Hence, liberalization makes the market accessible for all suppliers especially those that invest in renewable energy.

Marketing literature (Kotler, 2006., Grbac, 2005.) demonstrates how energy companies use elements of the marketing mix to redefine its marketing strategies, especially in situations when the market liberalization is an active process. The energy product as a first element of the marketing mix can be considered as a raw material (oil, gas, coal) but also as a service (district heating and cooling). Accordingly, product policy is also a matter of the energy company's marketing strategy in order to increase sales of that product or service and gain profit. Other authors (Dahl 2008) write about the energy price that the amount of certain product or service gives positive reaction on the number of customers, the energy substitute price and income. The amount of energy supply has positive reactions on the number of producers and the price of that energy product. Based on that source, it can be determined that the energy sector is characterized by inelasticity, where the energy price growth does not follow the equivalent decrease of the energy demand. Placement, as the third marketing mix tool, can be observed through market liberalization of distribution and free competition, where the value of distribution is determined by technology and the quality of energy transportation (Dahl, 2008.). Promotion, as the fourth element of the marketing mix, can focus on individuals in order to increase the level of a company's reputation in the society by encouraging active relationship with customers. Promotion can run a campaign to promote the company, or it can run a campaign to tackle the specific cultural beliefs (Hull, 2003.). Promotion in energy companies is mostly determined by public relations and customers relationship in order to restore environmental and social responsibility. The fact that the transformation success depends on the marketing mix, goes in favour of this paper's hypothesis. Other researches, corresponding to this paper's subject (Grbac and Radulović, 2008.), reveal that the marketing activities in energy companies' transformation can be described through six mutually connected processes: 1) market analyses and development of new business opportunities that have an influence on further activities, 2) marketing strategy and marketing plan development, 3) energy economics and marketing plan in the framework of sales growth and market regulation, 4) implementation of the marketing mix, 5) social responsibility and ethics in communication, 6) controlling and evaluation of mutually connected processes.

Other marketing and energy liberalization literature (Wieringa and Verhoef, 2007., Palmatier, 2006.) highlight the importance of customer switching and switching behaviour in liberalizing markets. Switching is one of the crucial issues for the energy companies' further business, because the possibility of customer

loss could easily become a reality. Customer switching is the opposite of customer loyalty, whereas marketing researches mainly consider the utility or value of an economic and psychological relationship from a switching costs perspective (Palmatier, 2006.). Foundations of an exploratory study on energy customer switching, revealed several important issues that influence customers to switch from one energy company to another. Firstly, customers are generally familiar only with the former monopolist energy company and they know from previous experience what they can expect. Secondly, customers in a liberalizing market are unaccustomed to switching, and inertia might represent a more important determinant of customer switching. Thirdly, switching costs combined with a lack of experience in the market where customers can find it difficult to assess a fair price. The final results of that study (Wieringa and Verhoef, 2007.) reveal that the relationship quality between an energy company and its customers is a particularly important driver of the customers' switching intentions.

According to data gathered by the Croatian energy market operator HROTE⁵, during 2007 there were 14 electricity companies registered in the Republic of Croatia. At the same time in Croatia only 19 customers used the status of privileged customers. Their total consumption of electricity in 2007 was 912 722 MWh, or 6% of the total consumption in the country. The basic observation as regards the state of the electricity market in Croatia is the fact that only two companies can make the supply of privileged customers, of which one is owned by the government. At the same time there are 39 energy companies' gas distributors in the Republic of Croatia. Although the legal framework for a liberal energy supply exists, none of the gas energy companies offer gas to other customers outside their distribution area. A general remark on behalf of the energy companies' competition, regarding all the mentioned facts, is that the Croatian energy market is still closed and product oriented instead of being customer oriented (Grbac and Radulović, 2008.). In the study of the energy liberalization literature (Ljubić, 2007.) it seems that as the energy market in Croatia is becoming more competitive, the energy prices are generally expected to grow. If prices are too low, the energy companies may not be able to recover all the expenses they have incurred into in the past to serve their customers. The differential costs will be "stranded". Stranded costs or assets are costs that have been incurred by energy companies to serve their customers but may not be recoverable if customers choose other electricity suppliers (Ljubić, 2007.). These stranded costs exist in the transition from a regulated to a more competitive energy market. Related to the transition period of energy companies and their adjustment to an open competition, nowadays energy prices of electricity, gas and district heating are lower in Croatia than in other European countries (Dobrašin, 2007.). Subsequently, future ongoing liberaliza-

⁵ <http://www.hrote.hr> (January 2009)

tion and higher energy companies' competition will represent a serious threat of customers switching for all existing Croatian energy companies.

Several energy companies in Croatia use an active marketing approach in order to establish better relationship with their customers. Communication in an independent survey (Puls, 2007.), which included more than 300 people, in the Croatian city of Rijeka, demonstrates the acknowledgment of customers of the local energy company's marketing efforts. Almost 80 percent of interviewed customers were fully or mostly satisfied with the energy company's services. Other results regarding the energy company's environmental and social responsibility show that most customers do consider the energy company as a company that cares about community (Grbac and Radulović, 2008.). These results indicate that the open public communication in the energy economy liberalization represents a necessity in order to establish a systematic and closer relationship between the energy companies and customers in the transformation period.

During the energy company's life cycle loyalty of customers represents a significant fact in a long period of time. Behind the customers need for relationship with the company's product or brand, there is also a strong fear from the unknown and risk. The issue of energy market regulation can also become an obstacle in future business and can slow down the whole liberalization process. Hence, the conclusion to all of the above mentioned literature and other research data would be to accept the given hypothesis because the customers' reactions to changes usually result in switching towards those energy companies that have put additional efforts in the marketing activities and have taken their customers as a significant partner in the process of market liberalization. Furthermore, transformation that comes with emissions trading and investments in renewable energy and energy efficiency is closely connected with sustainable community development and active customer relationship that have become a necessity for energy companies' further development and business success.

5. Conclusions

Although extensive research considers the energy market liberalization as an open competition and struggle between energy companies, in order to enable a fair energy price for customers, this paper reveals that the marketing activities in the liberalization process represent a necessity for the success of the transformation process. Marketing activities create close links with customers and energy companies through the elements of marketing mix and over a long period of time. At the beginning of liberalization, at a time when the company is aiming to retain the existing market share or the majority of customers, when competitors

enter the market, the energy companies' quality of relationship with customers is essential in preventing customer switching. The combination between regulated and competitive segments made the liberalization process of the energy market particularly challenging and difficult. The instability of world economy is related to transformation that the energy sector has brought out to surface with all the important issues like: environment protection, lower emissions of greenhouse gases, and market liberalization. Considering all these facts, it is safe to assume that investments in green energy will represent an important factor in the new economy, the economy of knowledge. As a response to the increasing demand for energy, additional infrastructure has to be built to guarantee a high level public service. Also, the produced facts lead us to the conclusion that the European Union has become the leading new energy market in the world, committed to continue in the process of energy market liberalization and the implementation of more efficient energy legislation. A free competition approach to the energy market is the most significant step ahead that influences energy prices and service liberalization. Customers, as well as governments, expect cheaper prices, better services and energy supply stability. At the same time energy companies are facing stranded costs and loss of market share as a consequence of poor marketing activities and relationship quality with their customers. As regards the situation among Croatia's energy companies and market liberalization, it can be concluded that the liberalization process is undeveloped in practice, although all the energy liberalization legislation exists. The emissions trade in Croatia also shows a slow development and it seems that the government and the energy companies have left this issue to be dealt with later on. Croatian energy companies just started to use the marketing activities but it is obvious that the present insufficient customer relationship efforts will cause significant threat of customers switching and companies' stranded costs in the future. As the final conclusion it can be said that the energy market liberalization in Croatia should be more seriously analyzed on the macro and micro levels as one of the key issues of the national economic strategy. Also, every energy company should develop a marketing action plan in order to prevent customer loss and ensure conditions for a successful transformation.

REFERENCES

1. Barbu, A. D. et al. (2006). "Prospects for renewable electricity in the new EU member states", *Energy research centre of the Netherlands*, February, The Netherlands.
2. Bazart, C. (2003). "Liberalization of energy markets and company strategies: A diagnosis on the European gas market", *Spring meeting of young economist in Belgium*, April, Louven.

3. Belkin (2008). *The European Union's Energy Security Challenge*. Bruxelles: CRS report for EU Congress
4. Benthien, J. (2007). "Energy and environment", *Focus Denmark* – Ministry of Foreign Affairs of Denmark – The Trade Council, March, Copenhagen.
5. Carvalho, G., Hammarlund, C. (2007). "After Kyoto". In *BEPA Monthly Brief – Issue 1*. From World Energy Outlook 2006 in OECD/IEA 2006.
6. Churchill, G. A. and Peter, J. P. (1994). *Marketing - Creating Value for Customers*. Homewood: Irwin.
7. Dahl, C. A. (2008). *Međunarodna tržišta energije – cijene, politike i profiti*. Zagreb: Kigen.
8. Dobrašin, M. (2007.) "Inefficient liberalization of the USA energy market as a warning to Europe", *Poslovni dnevnik*, Masmedia, September, Zagreb, p.14.
9. Duke, R. and Kammen, D.M. (1990). "The Economics of Energy Market Transformation Programs", *Energy Journal*, Vol. 20, p. 15.
10. Evans, P. C. (2002). *Liberalizing Global Trade in Global Services*. Washington D.C.: AEI Press,
11. European Commission (2007.a). "An energy policy for Europe", *Communication for the Commission to the European Council and the European parliament*, COM, January, 1 final.
12. European Commission (2007.b). "Limiting global climate change to 2 degrees Celsius. The way ahead for 2020 and beyond, *Communication for the Commission to the European Council and the European parliament*, COM, January, 2 final.
13. Gomez-Villalva, E. et al. (2003). "Optimal energy management of an industrial consumer in liberalized markets", *IEEE Transactions and power system*, Vol. 18, No. 2.
14. Grbac, B. (2005). *Osvajanje ciljanog tržišta*, Rijeka: Ekonomski fakultet Sveučilišta u Rijeci.
15. Grbac B. and Radulović D. (2008). "New Energy Marketing", *Environment, Ecosystem and Development, 6th International Conference*, WSEAS, Cairo.
16. Hublin, A. et. al. (2007). "National inventory report 2007", *Republic of Croatia, Ministry of environmental protection, physical planning and construction*, October, Zagreb.
17. Hull, L. (2003). *A promotion of enterprise culture*. New Zeland: New Zeland Ministry of economic development.
18. Ilie, L. et al. (2007). "Liberalization and Regulation in EU Energy Market", *MPRA*, December, Munich.

19. Kamstra, J. (2003). *Energy Management Program*, Toronto: Energy and waste management office.
20. Kigallon, W. and Lampe, R. (2007). "Transformation planning and implementation: An evaluation of process, experience and future directions", *Journal of Medical marketing*, Vol.7, 277-286.
21. Koster, P. (2007). "European Climate Exchange", *European Business Forum on Renewable Energy Sources, Intelligent Energy Europe*, (November), November 2007., Cavtat, 135-137.
22. Kotler, P. et al. (2006). *Principles of Marketing, 4th European edition*. Prentice Hall, Upper Saddle River.
23. Kourdi, J. (2007). *Business Strategy*. Zagreb: Masmmedia.
24. Ljubić, N. (2007). "Market liberalization: an analysis of the Austrian electricity market", *GRIN*, Verlag.
25. McKinsey & Company (2005). "Review of EU emissions trading scheme", *European Commission, Directorate General for Environment*, November, Bruselss.
26. Muir, M. (2002). "European Energy Liberalization and the Integration of Eastern Europe with EU Energy Markets and Environmental Initiatives", *ENERGEX Conference*, Krakow.
27. Novak P. (2008). "Transforming Europe to a Competitive Low Carbon Society – Why not?", *International Congress Energy and Environment*, Vol.1., Opatija, 1-12.
28. Official Gazette (2001). "Zakon o energiji", *Republika Hrvatska*, Zagreb, 68/01, 177/04, 76/07.
29. Palmetier, R. W. et. al. (2006). "Factors influencing the effectiveness of relationship marketing: A Meta-analysis", *Journal of Marketing*, 70 (July), 138-153.
30. Polo, M. and Scarpa, C. (2003). "The Liberalization of Energy Markets in Europe and Italy", *IGIER*, Universita Bocconi (January), Milano.
31. Pokrovac, P. A. (2007). "Growth of Renewable Energy Sources", *Gospodarstvo i okoliš*, Zagreb, Vol. 85, 245.
32. Puls Ltd. (2007). "Utility market survey report on customer satisfaction in Rijeka", City of Rijeka, Rijeka.
33. Rajan, G. G. (2002). *Optimizing Energy Efficiency in Industries*. New York: McGraw-Hill.
34. Republic of Croatia (2006). *National communication of the Republic of Croatia under the United Nations framework convention on climate change*.

- Zagreb: Ministry of environmental protection, physical planning and construction. p. 43-52.
35. Republic of Croatia (2008). *Energy in Croatia 2007 - Annual energy report*. Zagreb: Ministry of economy, labor and entrepreneurship.
 36. Stanić, Z. (2007). *Održivi razvoj elektroenergetike u uvjetima otvorenog tržišta*. Zagreb: Sveučilište u Zagrebu, Fakultet elektrotehnike i računarstva.
 37. Vešligaj, and Hublin, A. (2005). *Technology needs assessment report*. Zagreb: Ekonergh.
 38. Višković, A. (2008). *Svjetlo ili mrak: o energetici bez emocija*. Zagreb: Akademija tehničkih znanosti Hrvatske, Lider press d.d.
 39. Wieringa, J. E. and Verhoef, P. C. (2007). "Understanding customer switching behaviour in a liberalizing service market: An exploratory study", *Journal of Service Research*, Volume 10, No.2, 174-186.
 40. Zyuzev, R. (2008). "Gas market liberalization as a key driver of change of the European gas market and its influence on the strategies of the main players". *Institut Europeen des hautes etudes internationals*, May, Nice.

ENERGETSKE TVRTKE UNUTAR PROCESA LIBERALIZACIJE TRŽIŠTA ENERGIJE

Sažetak

Transformacija globalnog tržišta energije predstavlja izazov, ali i stvarnost za sve energetske tvrtke u svijetu. Ovaj članak analizira utjecaj liberalizacije tržišta energije na poslovne strategije energetskih tvrtki, a obuhvaća i odnose s kupcima. Analiza se zasniva na raznim znanstvenom radovima, gdje većinom prevladavaju autori koji istražuju proces liberalizacije energetike u Europi, sustav trgovanja emisijama stakleničkih plinova te marketinške aktivnosti energetskih tvrtki, uz poseban naglasak na liberalizaciju tržišta energije u Hrvatskoj. Dobiveni rezultati upućuju da proces liberalizacije energetike determinira kvalitetan odnos između energetskih tvrtki i njihovih kupaca. Sukladno tome, zaključak ovog rada predlaže energetskim tvrtkama da razviju snažniji odnos s kupcima kroz marketinške aktivnosti i efektivnu komunikaciju, kako bi si olakšale proces transformacije, ali i zadržale udio na tržištu energije.

Ključne riječi: tržište energije, liberalizacija, transformacija, marketing, okoliš