

# A GLANCE AT THE EUROPEAN ENERGY MARKET LIBERALIZATION

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**Abstract:** *This paper offers a presentation on the liberalization process on the energy markets that started two decades ago and takes place across Europe in the attempt to create a single European energy market. Several benefits are expected following the deregulation process such as higher competition, market transparency, lower prices, increased efficiency and product development in the clients favour. Three very different energy markets are analyzed before and after the liberalization process –UK, Germany and France –a short insight on the current Romanian energy market is also offered. The aim of this paper is to provide a better understanding on liberalizing European energy markets.*

**Keywords:** energy market; liberalization; deregulation; competition; monopoly.

**JEL Classification:** L16; L94; Q43.

## INTRODUCTION

The liberalization of the energy market was a very important step for the energy industry as it has influenced the economy of different countries, but most of all it had a significant impact on both industrial and domestic consumers. Over the last 25 years more and more developed and emerging economies started to streamline the process of privatization, restructuring, reorganization and liberalization in this strategic sector, initially monopolized by the government which took action through price regulation.

Government ownership on the electricity market involves a high level of responsibility. The monopolistic market is characterized by no competition in the sector, market entrance barriers, non-transparent pricing and regulation necessary in order to avoid any abuse of a market dominant position. The government's role is to protect the consumers by keeping the prices at bay and bring a restriction to possible negative effects like produced quantity limits. On the other hand, a liberalized energy market involves higher competition, consumers' right to freely choose their supplier, transparent pricing and encouragement of investments into the energy sector, all of these factors leading to overall consumer welfare.

The final objective of the liberalization process throughout Europe is to create an EU-wide integrated energy market. Though important results have been achieved in the energy market

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liberalization area in different countries from Europe, the final objective is far from completion and will not be reached soon. Significant differences between EU members in the energy market development will delay the process. For example, whilst the energy market in United Kingdom is fully functional and liberalized, some other countries, like Romania, are just starting this process. The integrated energy market involves removing differences between member states, setting common rules, competition between suppliers at a European level, price alignment, common objectives in environment protection, etc. The European Union has adopted different legislation packages in order to support the energy market liberalization and the integration of the members' energy markets. The first directive was adopted in 1996 for electricity and 1998 for gas concerning common rules for internal electricity and gas markets. The second one was adopted in 2003, a more complex directive having as final objective to set up the legal frame for full market liberalization. Finally, the third energy directive, adopted in 2009, supports the further opening of the energy markets and establishes an agency for the cooperation of energy regulators.

## 1. THE BEFORE AND AFTER OF THE ENERGY MARKET LIBERALIZATION

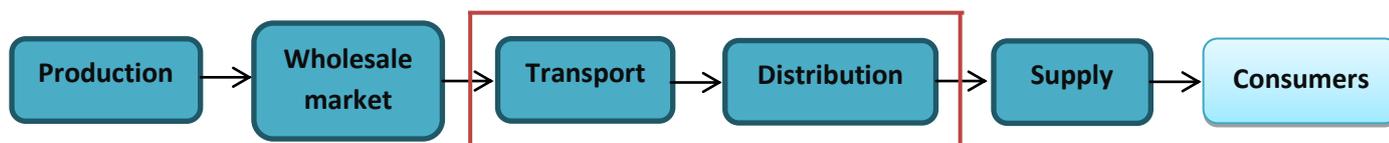
In order to better understand the liberalization process it is necessary to analyze how the energy market operates before and after deregulation. The energy market is very different from other industrial sectors as it has some unique characteristics. Electricity represents a product that cannot be differentiated in terms of quality, it cannot be stored and its cost depends mostly on the way it is produced. Also, the demand of electricity is highly inelastic and as it has no substitutes, the supplier must be sure he can deliver as much electricity as it is required at any given moment. Due to all these factors the energy sector has been organized as a state owned monopoly in most European countries and the liberalization process can often be troublesome (Domanico, 2007).

A fully state owned energy market is vertically integrated, meaning that one actor is involved in all the delivery process, from generation to retail. This is represented better in the following scheme:



The liberalization process is a long run and involves following different steps like the privatization of the state-owned electricity monopolies, separation of competitive segments, restructure of generation and transmission, creation of a public wholesale energy market (Joskow, 2008). Another view on the energy market liberalization presents almost the same action points: separating the generation from supply, applying measures that prevent a big market share of one single player, creation of competitiveness in generation, trading systems, introducing a system operator that manages the spot market, competition in the retail market and the control of one authority over issues like fair competition (Grimston, 2004).

After liberalization parts of the supply chain are open to new market entrants and to competition as presented below:



The liberalization process creates competition in the buying and selling of energy and brings an advantage to the consumers who are able to freely choose their supplier. The transport and distribution area often remains a natural monopoly due to high investments costs but is unbundled from the production and supply part. In order to access the transmission system, third parties have to pay regulated tariffs. The wholesale market enables multiple parties to trade energy on a number of platforms, leading to transparent pricing. New entrants are allowed in the production sector because the government encourages investment into efficient. In practice, these advantages take long to appear and some of the disadvantages tend to discourage the consumers, but these will be discussed at a later date.

## 2. ENERGY MARKETS IN EUROPE

Across Europe, the energy market liberalization has reached different levels as each member state approached the process in its own way. While some of the countries viewed the liberalization process as a necessity in order to maintain the community prosperity, evolution, international competitiveness and economic growth, others preferred to maintain the government monopoly.

The liberalization process started in late 1990's when the creation of the European Common Market brought into attention the fact that the differences between energy prices in the European countries affects the competitiveness of national companies. Fearing that some companies may relocate their production to obtain lower prices, the members started to consider reforming the

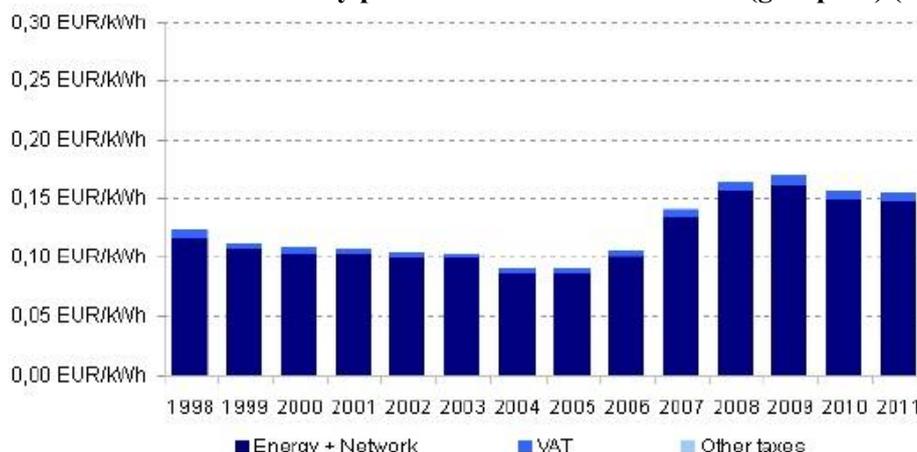
electricity market to support the price alignment (Heddenhausen, 2007). In order to make the liberalization process possible and easier, the EU-members were advised to take a series of measures in order to deregulate their national markets respecting a certain deadline. The European Union also promoted the improvement of cross-border trading rules and widening of cross-border transmission links. As mentioned before, the final objective of this process is to develop a single energy market in Europe (Jamassb and Pollit, 2005). This paper is going to analyze further the energy market evolution in some countries across Europe.

## 2.1 UK energy market

The UK energy market is at the moment fully mature and liberalized. The deregulation process started with the adoption of the Electricity Act from 1989 that supported the privatisation of the UK electricity market, the creation of supply, generation, distribution and transmission structures and the removal of old Central Electricity Generation Board. Between 1990 and 2001 a major change occurred in terms of supplier and generation market evolution characterized by new entrants and consolidation. Another major step in the liberalization process came with The Utilities Act from 2000 that made possible the creation of the first wholesale trading market for electricity which came live in 27<sup>th</sup> of March 2001.

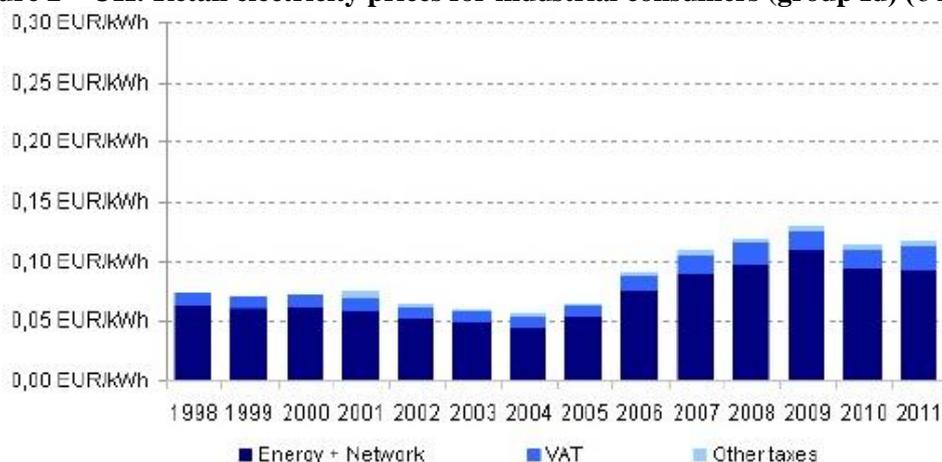
Although the liberalization process is supposed to involve lots of advantages including price reduction, this is not happening all the time. For example, at the beginning, due to the fact that the energy price is obtained freely on the market through the offer/demand confrontation and because the government subsidies and protection are withdrawn, this tends to grow. Also, a lot of other negative effects appeared: the electricity market lost 110 000 jobs, the prices grew for domestic consumers fluctuating from 0.103€ with a 0.027€ per kWh average value per month between 1991 and 1998 (Hall, 2005). From 1998 onwards the prices began to decrease mainly due to the higher competition on the market and the services offered by the suppliers were better in terms of quality. Graphics from a study presented by the European Union on the price development on the EU retail markets for electricity for both household and industrial consumers is shown below:

**Figure 1 – UK: Retail electricity prices for domestic consumers (group Dc) (€ 2005)**



Source: Eurostat

**Figure 2 – UK: Retail electricity prices for industrial consumers (group Id) (€ 2005)**



Source: Eurostat

As the graphics show, both prices for domestic and industrial consumers have decreased starting with 1998 until 2005 and 2004 when the prices started to grow again. However there is a big discrepancy between the prices paid by the two categories of consumers, domestic consumers having to pay double the price for energy than industrial ones. This happens because the industrial consumers have larger power in the negotiation of their contracts due to higher levels of consumption.

To conclude, the UK energy market after liberalization was characterized by mergers, failures and new entrants that have changed the supply market, generation market split by various companies, a clear split between generation, distribution and supply, product evolution and volatility as the main concern alongside curve liquidity.

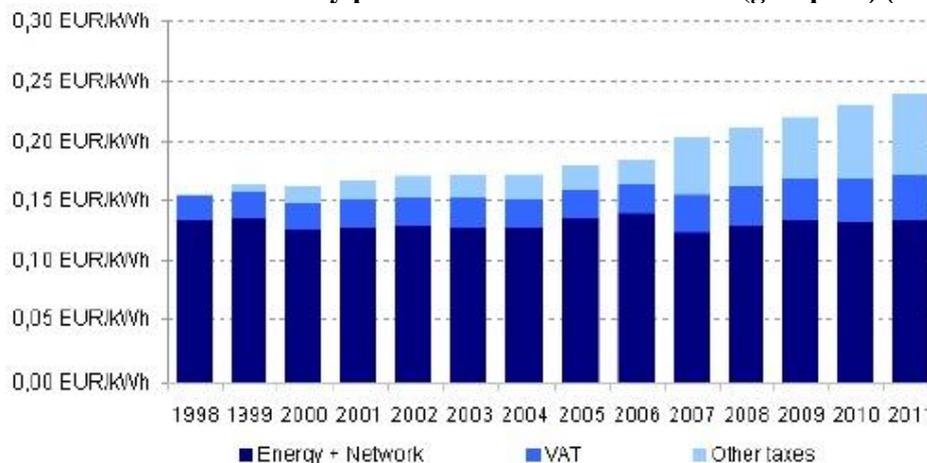
## 2.2 German energy market

Another market characterized in present by full liberalization is the German one. Germany started the liberalization process in April 1998 having as objectives the promotion of diversification of energy supply, reduction of energy costs and improvement of energy efficiency and development of renewable sources. In Germany there was never a national electric monopoly established under the government. Though a big number of suppliers were active on the German electricity market prior to deregulation, the market was not highly competitive. Suppliers were splitting different areas between them by signing contracts with other providers explicitly to exclude competition (Danwitz, 2006).

The electricity prices started to decline for both industrial and domestic consumers starting with the liberalization process with 20%, respectively 5% but mostly due to high market pressure and induced rationalization. Employment dropped with a number of almost 82 000 in the energy sector between 1993 and 2000 and the mergers and acquisitions that took place on the German market lead to the reduction of the market players. Although the previously mentioned facts, the German market shows a strange behaviour among suppliers that prefer to cooperate rather than practice competition although this is the factor that should improve efficiency and productivity (Madlener and Jochem, 2001).

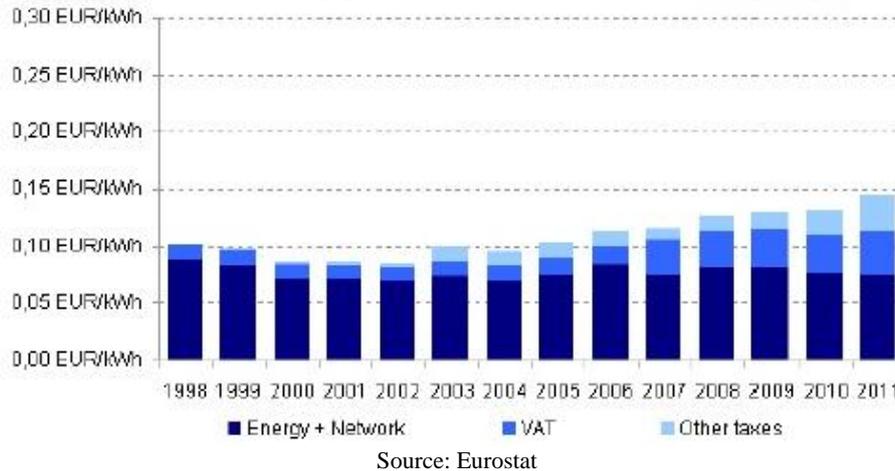
After 1998 the prices for electricity for industrial and domestic consumers began to increase slightly each year. Unlike in the United Kingdom, in Germany the difference between the prices paid by industrial and domestic consumers is lower than double. The graphics presented below show the price evolution for both type of consumers starting with 1998:

**Figure 3 – DE: Retail electricity prices for domestic consumers (group Dc) (€ 2005)**



Source: Eurostat

**Figure 4 – DE: Retail electricity prices for industrial consumers (group Id) (€ 2005)**



Although the country enjoys a fully liberalized market in theory, the practice shows technical difficulties and obstacles. Only 2-3% of the domestic consumers have switched suppliers in Germany (Mossavar-Rahmani, 2001).

### 2.3 France energy market

Unlike the other two markets presented that are fully liberalized, France has preferred to follow the minimum steps required by the European Union in terms of deregulation. The country tends to disregard the agreements put in place by the EU. The liberalization process started only in 1999 and the level of state protection is still very high. The degree of liberalization in France has only reached 30%, one main supplier – EDF, having a huge market share of 98%.

Due to the lack of the country cooperation in this area, others members of the European Union started to complain. Spain threatened to start blocking the access of French companies on their own market, whilst The Nederland's said they may put an end to the energy import from France as long as this country refuses to cooperate (Froggatt, 2000). It is not rare that France has been referred in this deregulation process started at the European level as being the “black sheep”, stubbornly maintaining the national energy model with strong state intervention (Meritet, 2007). With all this, it is not a surprise that the prices have been decreasing from 1998 onwards and are among the smallest ones across Europe, the government having to put a special effort in maintaining these prices at these levels.

### 3. TOWARDS ENERGY MARKET LIBERALIZATION IN ROMANIA

The liberalization of the energy market in Romania means, as we've seen so far, the separation of the main activities of generation, transport, distribution and supply, step that has already been taken. At the moment, a consumer can freely choose their supplier in theory. The next step would be the government's release of the price control. Over the last year, the country's government has adopted a law that pledges to bring its national legislation at the same level reached by other EU members by taking into consideration the latest regulations and directives on electricity and gas. The ultimate goal for Romania is to eliminate the monopoly over the energy industry so that the prices will be determined by the supply and demand action in order to obtain a transparent market, where competition allows consumers to benefit from lower prices and quality services.

According to the plan adopted by the government the price liberalization will be made in several stages in order to protect the consumer from price explosion, as following:

-For industrial consumers the electricity price will be liberalized in proportion of 15% by 1<sup>st</sup> of September 2012, 30% by 1<sup>st</sup> of January 2013, 45% by 1<sup>st</sup> of April 2013, 65% by 1<sup>st</sup> of July 2013, 85% by 1<sup>st</sup> of September 2013 and 100% by 1<sup>st</sup> of January 2014;

-For domestic consumers the electricity price will be liberalized in proportion of 10% by 1<sup>st</sup> of July 2013, 20% by 1<sup>st</sup> of January 2014, 30% by 1<sup>st</sup> of July 2014, 40% by 1<sup>st</sup> of January 2015, 50% by 1<sup>st</sup> of July 2015, 60% by 1<sup>st</sup> of January 2016, 70% by 1<sup>st</sup> of July 2016, 80% by 1<sup>st</sup> of January 2017, 90% by 1<sup>st</sup> of July 2017 and 100% by 1<sup>st</sup> of January 2018.

Therefore, the current regulated tariffs will be eliminated in six stages for the industrial consumers and ten stages for domestic consumers. These percentages suggest the quantity of energy that will be delivered on the free market for price determination; it doesn't mean that the prices will increase with the same level. A set of measures to support competition development and market transparency is also considered.

This scenario was adopted for several reasons: price increases will also come in stages allowing the gradual implementation of competitive prices from suppliers in order to avoid sudden and significant price increases. Moreover, the scenario permits a better control over the process with the possibility of postponing a further step and also to return to a previous one if the effects are difficult to handle by the consumers. The liberalization will most probably bring price increases at the beginning and the advantages later, but Romania committed to undertake this step when it became member of EU.

#### **4. ADVANTAGES AND DISADVANTAGES OF THE ENERGY MARKET LIBERALIZATION PROCESS**

The effects of the liberalization process are long disputed. On the good side, the liberalization process should bring a transparent market, with fewer regulations and restrictions in the economy for greater participation of private entities, major investments in the generation capacity, shift to renewable energies, consumers' right to choose their supplier, etc. On the other hand, the energy market liberalization doesn't necessarily bring lower prices; on the contrary, these may rise at the beginning of the process and employment in the energy sector may drop.

Liberalization of the energy market is expected to increase efficiency because of the competition pressure and furthermore, to price reduction. In both UK and Germany we have seen this happening. Also, higher levels of efficiency achieved should lead to cost reductions and possibly lower prices. At the moment, across Europe, prices vary, causing distortions in competitive conditions across EU-members that can be canceled by the price alignment through liberalization. Competition gives customers the right to choose the nearest, cheapest supplier offering the best services for him. Competition will also stimulate suppliers to improve their services (Dizdarević, Host and Galović, 2010).

The higher level of efficiency obtained by technological improvement will translate into job losses, as a negative effect of the deregulation. More than 250 000 jobs have been lost from the beginning of the process. Also, the privatization process involves significant costs, exceeding the benefits. But the main disadvantage remains the price that tends to increase in the first years of deregulation.

#### **CONCLUSIONS**

Over the last decades, important steps have been taken across Europe in order to liberalize the energy market at the national level of each member to make possible the birth of a common energy market at a European level, characterized by price alignment, market transparency, access of suppliers on every energy market in Europe, consumers' right to choose the best possible offer. Though the level of market liberalization reached by the members on their attempt to deregulate their national market is different from one country to another, the basic steps have been taken by most countries meaning that, in theory, each consumer can freely choose their supplier. In practice, this hardly applies, the markets are not that open and there are still several barriers that need to be

overcome. The common energy market will not be achieved too soon. At the moment, prices are not sufficiently competitive, consumers have difficulties in adapting to the new situation and understanding their rights as they are used to the idea that decisions should be taken for them.

The liberalization should bring benefits to both consumers and to the economic environment. But the liberalized markets cannot influence two important price components: the price of energy, often related to global/regional prices of fuels and the level of taxes and levies. This means that the price evolution cannot be determined. Competition and fair prices that reflect the real costs can only be achieved with a high level of commitment in this direction. Even when these conditions are satisfied, it takes a long time for markets to be fully implemented and developed so that consumers can benefit from competitive prices.

The deregulation process is still in progress. The complexity of the analyzed sector combined with the resistance of the traditional market operators has made this process difficult. National interests represent another obstacle to liberalization. Although the first step in opening the market was successfully made by most European members, several measures still have to be taken so that consumers can enjoy the full benefits of a free market. Since empirical evidence suggest that, in general, deregulation has played a positive impact on efficiency and consumers welfare in other sectors – telecommunications, air transport – the same results are expected for the electricity sector.

## REFERENCES

- Danwitz, T. (2006) *Regulation and liberalization of the European electricity market – a German view*, retrieved from <http://www.felj.org/docs/423-450.pdf>.
- Dizdarević, V.N., Host, A., Galović, T. (1996) *The genesis of EU electricity market opening: liberalization effects and obstacles*, retrieved from <http://oliver.efri.hr/~euconf/2009/docs/Session9/4%20Vlahinic%20Dizdarevic%20Host%20Galovic.pdf>.
- Domanico, F. (2007) *Liberalisation of the European Electricity Industry: internal market or national champions?*, *The Energy Journal*, 2007, retrieved from <http://89.206.150.89/documents/p001227.pdf>.
- Froggatt, A. (2000) *The Liberalisation of Europe's Electricity Markets - Is the environment paying the price for cheap power?*, Greenpeace International, retrieved from <http://www2.fing.ucr.ac.cr/~juanvale/archivos/WindEnergy/docs/Greenpeace-froggatt.pdf>.

- Grimston, M. (2004) *Liberalised Power Markets*, World Nuclear Association Annual Symposium, 8-10 September 2004, retrieved from <http://www.world-nuclear.org/sym/2004/pdf/grimston.pdf>.
- Hall, D. (2005) *Evaluating the impact of liberalisation on public services*, PSIRU, retrieved from [http://gala.gre.ac.uk/3642/1/PSIRU\\_9471\\_-\\_2005-03-EU-U-horizeval.pdf](http://gala.gre.ac.uk/3642/1/PSIRU_9471_-_2005-03-EU-U-horizeval.pdf).
- Heddenhausen, M. (2007) *Privatisations in Europe's liberalized electricity markets – the cases of the United Kingdom, Sweden, Germany and France*, Research Unit EU Integration, German Institute for International and Security Affairs, retrieved at [http://www.swp-berlin.org/fileadmin/contents/products/projekt\\_papiere/Electricity\\_paper\\_KS\\_IIformatiert.pdf](http://www.swp-berlin.org/fileadmin/contents/products/projekt_papiere/Electricity_paper_KS_IIformatiert.pdf)
- Jamasb, P., Pollit, M. (2005) *Electricity Market Reform in the European Union: Review of Progress toward Liberalization & Integration*, The Energy Journal, Vol. 26, pp.11-41, retrieved from <http://web.mit.edu/ceepr/www/publications/workingpapers/2005-003.pdf>.
- Joskow, P. (2008) *Lessons Learned From Electricity Market Liberalization*, The Energy Journal, 2008, retrieved from <http://econpapers.repec.org/article/aenjournal/dn-se-a03.htm>.
- Madlener, R., Jochem, E. (2001) *Impacts of market liberalisation on the electricity supply sector: a comparison of the experience in Austria and Germany*, ForschungimVerbund, Vol.74, pp. 131-140, retrieved from [http://www.cepe.ch/download/staff/reinhard/madejo\\_ossiach2001\\_header.pdf](http://www.cepe.ch/download/staff/reinhard/madejo_ossiach2001_header.pdf).
- Meritet, S. (2007) *French perspectives in the emerging European Union energy policy*, Energy Policy, Oxford Elservier, Vol. 25, p. 4767-4771, retrieved from [http://basepub.dauphine.fr/bitstream/handle/123456789/210/Meritet\\_Frenchp.pdf?seque](http://basepub.dauphine.fr/bitstream/handle/123456789/210/Meritet_Frenchp.pdf?seque).
- Mossavar-Rahmani, B. (2001) *Energy Liberalization and regulation revisited*, The Repsol YPF-Harvard Seminar Series, retrieved from [http://www.hks.harvard.edu/fs/whogan/Repsol\\_Seminars/Repsol\\_Seminars\\_Recent/Repsol\\_Mallorca\\_2001.pdf](http://www.hks.harvard.edu/fs/whogan/Repsol_Seminars/Repsol_Seminars_Recent/Repsol_Mallorca_2001.pdf).
- The Market Observatory for Energy (2012) *Price developments on the EU retail markets for electricity and gas 1998 – 2011* retrieved from [http://ec.europa.eu/energy/observatory/electricity/doc/analysis\\_retail.pdf](http://ec.europa.eu/energy/observatory/electricity/doc/analysis_retail.pdf).