



## **THE EUROPEAN ELECTRICITY MARKET LIBERALIZATION**

*Motives, problems and benefits for the consumers.*

Master's Thesis

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## INTRODUCTION

### **BACKGROUND**

In the last two decades Europe has experienced a transcendental transformation in the Energy markets, there has been a leap from State owned monopolies to liberalised markets where private entities compete with each other. This liberalisation was designed to achieve lower prices, increase the efficiency and make markets more transparent. The original intention was to create a single European energy market to produce benefits for the final consumers throughout Europe, lowering prices and achieving a more competitive environment. This process was devised for the main energy sectors: natural gas and electricity, and both sectors have undergone parallel processes with the creation of similar laws and following the same objective, privatization to foster competition and make the system more efficient. I will focus exclusively on the electric market and its peculiarities leaving the gas market aside. The process of liberalisation has been long and difficult, and it is far from completion. This is because there are deep differences between the EU members. Whilst in some Member States the market has been liberalised and functional for many years e.g. Germany or the UK, in others the liberalisation process began not too long ago e.g. Romania in 2007. This irregular landscape makes the process even more difficult than it is *per se* and has caused important delays and problems in achieving a fully integrated common market. Until there is a fully liberalized market in Europe where each and every country has an open market according to the European directives, the process will not be completed and even then, there will still be many problems to solve. The First Directive<sup>1</sup> was a pioneer on its field but insufficient for the objectives sought, it designed the liberalization process for 15 countries, now the European Union is formed by 28 countries and each new country has to undergo this liberalization process individually upon becoming a member of the EU, with the subsequent confusion this adds to a turbulent landscape and the extra burden added to the Commission workload. The following directives<sup>2</sup> addressed the problem more efficiently but they have proven to be still in need of further improvement because the system is not perfect yet, as we will observe because is still afflicted by many errors that should be solved.

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<sup>1</sup> 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.

<sup>2</sup> 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.

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity.

## **PROBLEM DESCRIPTION**

The principal purpose of this thesis is to analyse and assess in a general manner the principal reasons that drove the European Union to adopt this transition to a more liberal market and evaluate if all this process has proven to be beneficial for the final consumers in *ultima ratio*. One important point is to critically assess if this liberalization has achieved its primary goal and improved the electricity sector by making it more competitive, or if otherwise, the system was better when the electricity sector depended on the government monopolies alone. There are still many downsides in this whole process that affect the system, keeping away the benefits pursued, a discussion over this points will also be held.

## **METHODOLOGY**

The main source used for finding the solution to the problem presented will be the successive Electric Directives and European energy policies. The secondary sources will consist on doctrinal articles by different scholars where they expose material facts and give their personal opinion based on their own findings, the introduction of empirical data will be a constant to help support my conclusions. This will also help me set the background and landscape needed to support my answers.

## **THESIS STRUCTURE**

This thesis will be structured in three chapters to develop the main points of the thesis and one final chapter where I will present my conclusion based on the information provided before.

The current chapter is the introduction and it describes the object pursued by the thesis, the background that we encounter to focus the problem and the way the thesis is structured. Also the methodology followed for writing the thesis is provided.

The First chapter will address the progressive process of liberalization, the reasons that drove the European Union to adopt this new model and consequently the regulations followed by the European Union to achieve this purpose (briefly addressed to highlight the main points) focusing mainly on their effect on the consumers, the three consecutive Electric Market Directives and several Commission reports will be the main sources of information. At the same time the legislative framework is explained step by step (avoiding entering into much detail), the successive improvements introduced in each new legislative package will be critically assessed, accompanied by a thorough analysis of the changing landscape. This thesis

will not enter into detail over the different measures devised (unbundling, TSOs, DSOs...), they will only be commented since the main point I want to address is the effect on the consumers by the Directives, what rights and objectives are contemplated and what measures are contemplated to protect them.

The Second chapter will be based on the legislative framework set by the previous one and will conduct a study and comparison of the main approaches to the relevant legislation that EU countries adopted during the liberalization to envisage the effect produced over the national consumers and compare the diversity of outcomes they led to<sup>3</sup>, e.g. in Germany or the UK where the full liberalization has been achieved and the electricity market is fully free, France where the liberalization process was kept to the minimum standard required by the European Union and the state protection is still very high and finally cases like the Spanish one, where the market is liberalized as well but the implementation of the system has led to many problems, meaning less benefits for the consumers due to the inconsistent electric tariffs. Every system's strong and weak points will be studied but focusing mainly on the Spanish problem due to the singularity of this system and all the problems it encompasses, Spain represents the negative side of this European liberalization where many European users resulted benefitted while others suffer from a wrong implemented system.

For the Third chapter, the specific difficulties this particular market suffers from and the facts that nowadays hinder or slow the consecution of the common market, like high prices or concentration in most of the national markets. The way these problems affect the final consumers and the internal common market.

Finally, the last part of the thesis will present the conclusions, summarizing the main points, findings and providing the answer to the main question, has the electricity liberalization proven to be beneficial for Europe and if so, to what extent.

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<sup>3</sup> Each main approach will be represented only by the most relevant exponent of that trend. Not all the EU countries will be analysed

## **FIRST CHAPTER: The objectives and process behind the Liberalization**

The roots of the energy reform date back more than fifty years in time, pointing to the Treaty of Rome 1957 that contemplated liberalization for all commodity markets including the energy market<sup>4</sup> but without containing any single word on European energy policy<sup>5</sup>. It was not until 1987 with the Single European Act (SEA) that State-owned monopolies were challenged and effective steps were taken to abolish these monopolies in order to achieve free movement of goods, services, capitals and labour in the European Union (EU)<sup>6</sup>. In the 1990s energy markets were still heavily regulated, state-owned, vertically integrated monopolies, the explanation for this particular structure resides in the peculiar characteristics that the energy markets display (specially the electricity one). The particularities of the electricity sector reside in several factors: firstly, electricity is a very homogenous product from the consumers' point of view. Secondly, the production costs of this energy are heterogeneous due to the different sources existing to produce it (solar, wind, hydro and thermal generation). Thirdly, demand is highly inelastic and there are no known substitutes for it. Fourthly, electricity is yet a non-storable commodity that requires a constant supply and it is necessary to balance demand and supply to ensure the effective service to the final consumers<sup>7</sup>.

These specific characteristics exposed above configured the electricity industry as a commodity considered to be an essential good of public utility, constituting a basic factor for the functioning and welfare of the society. Hence the monopoly structure, where countries' energy markets were heavily regulated to ensure that every citizen had access to this "public service". Being monopolies the easiest way to manage these requirements, where substantial investment is required to maintain and to build network infrastructures and power plants, necessary to meet consumers' electricity needs. Besides, government monopolies were justified by the reason that the state was the guardian of this public interest and therefore it would be the least likely to act in an opportunistic manner, unlike monopolists tend to do<sup>8</sup>.

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<sup>4</sup> Jacques Percebois, "Electric liberalization in the EU: Balancing benefits and risks" (2008), 29 Energy Journal, pg. 2.

<sup>5</sup> Martha ROGGENKAMP, Catherine REDGWELL, *Energy Law in Europe: National, EU and International Regulation* (2nd edn, Oxford University Press 2007) pg. 227.

<sup>6</sup> Article 13 SEA 17 February 1986, supplementing article 8 of the EEC treaty.

<sup>7</sup> Fabio Domanico, "*Liberalisation of the European Electricity Industry: Internal Market or National Champions?*" (2007), pg. 3 – 4.

<sup>8</sup> Erkan Erdogan, "*Electricity Market Reform: Lessons for developing countries*" (2010) MPRA Paper No. 27317, Pg. 41.

Despite all this, in the early 1980s, European governments were faced with increasing competition by newly industrialised developing countries and envisaged the necessity of transforming this sector into a more competitive one, reducing energy costs to directly benefit consumers and industries, besides, the general perception at the moment was that monopolies were not as efficiently run as they should. The first proposal was made by the European Commission, considering the vital importance and benefits of the European single market for “cementing” the economic integration of the community, ensuring its future and the economic performance of Europe in the years to come. The Commission also acknowledged that “a more integrated Energy market is a significant additional factor as regards the security of supply for all Member States”, the need of interconnection between member countries to foster solidarity and the increase of resources in the event of a crisis. The integration of the market was considered of crucial importance at that time<sup>9</sup>. This document reflected the need for a more competitive approach in the Internal Energy Market. The trend in energy policy initiated by the Commission went “*in crescendo*” in the following years with several attempts to approve legislative measures to this respect, being constantly rejected by the Council<sup>10</sup>.

Continuing this trajectory, the Commission started challenging the existence of state owned monopolies, especially in the gas and the electricity Sectors, arguing that they made impossible the transition to an integrated European market. Since it was, at that time, almost impossible to get an agreement from the majority of Member states to liberalise these markets, the Commission began making use of the Articles contained on the EEC Treaty relating to competition law and the rules on free movement to force Member States to abandon these monopolies, since there were no specific provisions relating to energy policy at that moment. The Commission placed special emphasis on remarking the article 90 of the EEC treaty<sup>11</sup> (now Article 106) arguing that monopolies were colliding with the treaty requirements on the free movement of goods and that they could not be justified on the grounds of public

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<sup>9</sup> European Commission, ‘*Commission Working Document on Internal Energy Market*’, COM (88) 238, 2 May 1988, Arts. 13 to 21.

<sup>10</sup> A proposal for an electricity directive (which included the abolition of the exclusive rights of the national electricity companies, unbundling and introduction of third party access) was already drafted in 1992, but neither it nor its revised version could gather any support from the Member States.

<sup>11</sup> Article 90 (2) EEC Treaty: “*undertakings entrusted with the operation of services of general economic interest or having the character of a revenue-producing monopoly shall be subject to the rules contained in this Treaty, in particular to the rules on competition, insofar as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. The development of trade must not be affected to such an extent as would be contrary to the interests of the Community*”

service obligations<sup>12</sup>. Although this form of using of Article 106 may seem like a desperate move and out of context, it was the only way at the time, to challenge State monopolies without a proper legislative and energy policy framework to support the Commission's claims.

Once the Commission intentions have been assessed and the initial seed for new energy policies was planted, the adoption of the Treaty on European Union, signed in Maastricht in February 1992 finally included (although very limitedly) measures to be taken "in the sphere of energy" as one of the many tasks or activities entrusted to the Community for "establishing a common market and an economic and monetary union"<sup>13</sup>. One of the entities entitled to carry these activities in the name of the Community was the Commission<sup>14</sup>, although the Treaty only envisaged these measures in a general manner, not entering into further specifications, and even though they were still not really relevant for the energy liberalization carried afterwards, this precept did set the ground for future reforms.

After four years of negotiations, the First directive concerning energy markets was adopted in 1996, the Directive 96/92/EC concerning common rules for the internal market in electricity<sup>15</sup>.

Before entering into detail about the tools introduced by this directive to achieve a common and liberalized market, we have to enumerate the main goals<sup>16</sup> pursued by the European energy policy, which are:

- The creation of an internal market, introducing cross-country competition with the purpose of incentivising efficiency. Pursuing competitiveness of Member States' internal energy markets. The efficiency gains from this situation were expected to be transferred directly to final consumers in the form of lower energy prices.
- Guarantee of the energy supply security, a steady stream of energy availability for the final consumers.

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<sup>12</sup> Christopher JONES, William WEBSTER, *EU Energy Law: The Internal Energy Market* (Vol. I, 2nd edn, Claeys&Casteels 2006) par. 2.

<sup>13</sup> Articles 2 and 3 EC Treaty

<sup>14</sup> Article 4 EC Treaty

<sup>15</sup> 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, OJ L27/20

<sup>16</sup> Fabio Domanico, "*Liberalisation of the European Electricity Industry: Internal Market or National Champions?*" (2007), pg. 4 ss.



- Enhancement of environmental protection. The preservation of the environment by implementing joint and cooperative policies between countries.

These goals were designed to benefit consumers in several ways as the final objective of the legislation. The three goals presented above are a summary from the initial statements contained in the First Directive<sup>17</sup>, although they can be apportioned into multiple individual goals, the main intentions of the energy policies are the ones embodied above. It is worth mentioning that these goals have been upgraded and expanded during the years, although basically nowadays they remain the same, a comment on the newest policy goals will be made further onwards.

With this structure and precedent in mind, the analysis of the landscape of consumer benefits introduced by the liberalization of the electricity market would not be complete without a short remark on the tools and legislative measures implemented to protect these goals, introduced in the successive directives. The liberalization process could not happen overnight, it has been a long and slow process with many ups and downs and successive regulatory steps (three so far). The progressive improvements have been introduced gradually and consumers have seen their rights and benefits grow in a slow, yet constant, manner over the years until reaching the level of protection and welfare that we enjoy today, the landscape is totally different now from the one existing 20 years ago, although the process is not finished yet and there are still serious problems which will be addressed. All the previous step taken by the Commission in energy policy led to the adoption of:

### **The First Electricity Directive**

Directive 96/92/EC was the first attempt in the pursuit of an internal integrated European market, it prescribed a progressive market opening as the basis for an internal market for electricity and for the first time this regulation contained some common rules for the organization of the electricity sector. It set a mandatory timetable for the progressive entry of new competitors into a previously closed electricity supply industry and for an unprecedented availability of consumer choice for big (industrial) electricity consumers<sup>18</sup>.

The main measures introduced by this directive can be resumed like this. The first one concerns the restructuring of the existing market, starting from the point where the

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<sup>17</sup> Points 1 to 39 of the Directive 96/92/EC.

<sup>18</sup> Nicolas Jabko, *"The reform of energy regulation in the EU: The market as a norm"*, (2005) Paper prepared for delivery at the ECPR conference, pg. 2.

commission made a distinction between the competitive and non-competitive areas of this particular market<sup>19</sup>, where generation and supply (wholesale market and retail sales) were viewed as potential competitive areas of the supply chain worth fostering and transmission and distribution areas viewed as natural monopolies. For this purpose, the Directive tried to separate these areas one from another. The instrument used for this purpose was the *Vertical Unbundling* for vertically integrated companies in order to separate the competitive areas from the non-competitive ones and separate the diverse areas of the electricity supply owned by companies. Articles 7 to 12 of the Directive required Member States to designate System operators (TSOs and DSOs) which would determine access to the networks. These entities were forbidden to discriminate between system users or classes of system users, particularly in favour of its subsidiaries or shareholders and it imposed several obligations on the undertakings which owned transmission and/or distribution systems and make them responsible for “operating, ensuring the maintenance of, and, if necessary, developing the transmission system in a given area in order to guarantee security of supply”. The Directive also establishes that the system operators shall be independent from other activities not relating the transmission system. This provisions had the aim to open the market and avoid discrimination from vertically integrated companies towards possible competitors because if a network company is not effectively separated from its competitive activities (generation and supply) effective competition simply will not emerge<sup>20</sup>. For this purpose, the Directive devised three methods of access: negotiated third party access (generators and retail suppliers negotiate network access with the system operator), regulated third party access (generators and retail suppliers are allowed to access the network at previously published tariffs) or under the “single buyer”<sup>21</sup> option, where a single buyer previously designated by the member state would be responsible for purchasing electricity for overall country’s needs as would determine which power plants were to be used.

As far as generation was concerned, Article 4 left to each Member State discretion to choose between an authorisation procedure or a more interventionist tendering procedure as the main feature for the construction of new electricity generation capacity, the Directive did not go much into detail and did not implement any strict precepts, only stated that both types

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19 Although this distinction was not specifically introduced in the Directive at the moment, it was the underlying motivation behind the liberalization as it was demonstrated later onwards in the document, *Report: Electricity Liberalization Indicators in Europe* drafted in 2001 by the Directorate General for Transport and Energy.

<sup>20</sup> Christopher JONES, William WEBSTER, *EU Energy Law: The Internal Energy Market* (Vol. I, 2nd edn, Claeys&Casteels 2006), pg. 70.

<sup>21</sup> Article 18 of the Directive 96/92/EC, 19 December 1996, OJ L27/20

of devised procedures (either authorization or tendering) “had to be conducted in accordance with objective, transparent and non-discriminatory criteria”. Nonetheless, the Directive contemplated the fact that any undertaking should have the right to freely construct generating facilities in any EU country when and how they considered appropriate to do so, setting a precedent concerning the opening of the market. This choice of freedom planted the seed of the implementation differences between the Member States that led to an irregular market as it will be assessed later, with groups of countries where the market was fully opened and groups of countries where there was a more protective approach.

Finally in the supply sector of the directive, the competition was introduced only for the wholesale market, this is, only for large users and distributors and established several deadlines and thresholds to be fulfilled:

- By February 1999, about 26% (40 GWh/year) of the market had to be open,
- By February 2000, about 28% of the market had to be open (20 GWh/year) and
- By February 2003, about 33% of the market had to be open (9 GWh).<sup>22</sup>

Summarizing, this First Directive was certainly limited and did not imposed much pressure on the Member States since it contained a great degree of flexibility and discretion for them, it designed a system “à la carte”<sup>23</sup>. This feature has created a high degree of asymmetry between member countries, an undesirable fact, as it will be assessed later on the thesis because it has led to the creation of a very irregular market landscape, hindering the consecution of an effective internal market.

Although it was a necessary first step, it had a lot of deficiencies, the retail consumer was not mentioned a single time nor specific benefits were devised for them and no state independent regulator was appointed to monitor the market<sup>24</sup>, instead the main intention was to provide general objectives to achieve as a starting point of the liberalization process.

One of the most notable consequence of the Directive was to unleash a rapid process of mergers and acquisitions across Europe with the aim of strengthening national member states’ industry, between 1998 and 2002, 95 of these operations were conducted with the

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<sup>22</sup> Article 19 (5) of the Directive 96/92/EC, 19 December 1996, OJ L27/20.

<sup>23</sup> Nicolas Jabko, “*The reform of energy regulation in the EU: The market as a norm*”, (2005) Paper prepared for delivery at the ECPR conference, Pg. 12.

<sup>24</sup> Leading to a lack of supra-national coordination undermining the establishment of a true integrated market and resulting in a patchwork of single individual liberalised markets. Cameron, “*Competition in Energy Markets: Law and Regulation in the European Union*”. Oxford University Press 2002.

subsequent alteration of the EU's electricity landscape. This wave elevated the concentration of the electricity industry to unprecedented levels, increasing vertical concentration and abusive behaviour from the companies, augmenting Member States' protectionism. This fact led to the conviction that new and more effective regulation was needed, and provided the Commission with new arguments to insist on the creation of a Common market.<sup>25</sup>

### **The Second Electricity Directive**

After the limited reforms introduced by the previous directive and the lack of uniformity between Member States in the implementation of the First Directive, Directive 2003/54/EC of the European Parliament and of the Council, concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, was adopted on 26 June 2003. The idea behind this new directive was to further strengthen EU's energy policy, ensuring electricity supply to all consumers, full market opening<sup>26</sup>, higher service standard and business efficiency as well as security of supply and lower electricity prices<sup>27</sup>. This new Directive expressly mentioned final consumers (unlike the previous one, where no liberalization had been envisaged for household consumers yet) and set forth objectives and rules regarding their protection and rights such as<sup>28</sup>:

*-Public service obligations:* MS are allowed to impose public service obligations on electricity undertakings, clearly defined, transparent, non-discriminatory and verifiable.

*-Universal service:* Member States must ensure universal service for all household customers at reasonably, easily comparable and transparent prices.

*-Consumer protection:* In order to protect final customers and in particular vulnerable customers measures aiming to allow the possibility of switching suppliers easily, while at the same time being protected from disconnection.

*-Security of supply:* member states have to ensure the monitoring of security of supply issues, expected demand, balance and capacity.

The Directive provided upgraded rules to achieve the objectives stated above, European institutions realized that the rules of the first Directive were insufficient. For that purpose, the Directive contemplated stricter unbundling regimes for TSOs and DSOs requiring

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<sup>25</sup> Luis Guillermo Vélez Álvarez, "El mercado Europeo de la Electricidad", (2012) CIEF working document, pg. 16.

<sup>26</sup> After July 1, 2007, all customers must have the option to choose their electricity supplier

<sup>27</sup> Point 2 of the Directive's introduction

<sup>28</sup> Article 3 of the Directive 2003/54/EC, 26 June 2003, OJ L176/37.

their independence, at least in terms of their legal form, organisation, and decision making from other activities not relating to transmission<sup>29</sup>, further expanding the previous requisites. The remaining unbundling provisions were maintained.

The new directive, substantially limits the discretion of member states relative to the establishment of network access, there are no longer three methods of accessing the network and the Directive required a regulated network access to networks, The single buyer option was never properly implemented, and the negotiated access was discarded (only Germany opted for this system) facing a lot of controversy surrounding the effectiveness of this system<sup>30</sup>. The Second Electricity Directive left it to the discretion of the member states to choose a specific procedure for this regulation of the rates, terms, and conditions of network access.

As for generation is involved, the authorization procedure was the method intended to be the principal one when constructing new capacities, while the tendering method should only be used if authorization procedure would not result in sufficient generating capacity. Authorization procedures have the goal of easing the market entry, requiring objective, well founded and non-discriminatory evidences to refuse the authorization<sup>31</sup>.

For the first time, this Directive implemented several control mechanisms to ensure fair competition and consumer protection, for this purpose it prescribed that Member States must designate or establish an independent regulatory authority, with a minimum set of standard competences, among which were monitoring the market and intervention prerogatives for the cases of: rules on the management and allocation of interconnection capacity, any mechanisms to deal with congested capacity, effective unbundling of accounts to ensure that there are no cross subsidies between the areas of the electricity market and the terms, conditions and tariffs for connecting new producers of electricity. The Directive also required that member states provide the European Commission with a report<sup>32</sup> on market dominance and anticompetitive behaviour, in order to enhance competition and variety of non-dominate market actors, also an annual report to the European Parliament on the overall progress in creating a complete and fully operational internal electricity market was required. These measures increased the control and information over the liberalization of the market in

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<sup>29</sup> Article 10 of the Directive 2003/54/EC, 26 June 2003, OJ L176/37.

<sup>30</sup> Thomas von Danwitz, "*Regulation and liberalization of the European electricity market – a German view*", (2006) 27 Energy law journal, pg. 441.

<sup>31</sup> Pavle Jakovac, "*Electricity directives and evolution of the EU internal electricity market*", (2012) professional paper, p. 320.

<sup>32</sup> Article 27 and 28 of the Directive 2003/54/EC, 26 June 2003, OJ L176/37.

each country and involved the European institutions in the ongoing process with the role of international arbiters to ensure the consecution of the objectives.

The Second Directive made a significant progress towards establishing the market liberalization, it pointed out and reinforced the nature of energy supply as a service affected with a public interest more clearly than its predecessor, highlighting the tension between the goals of achieving competition and maintaining the public interest in a secure and adequate supply of electricity<sup>33</sup>. It established a stronger regulatory framework and introduced methods for controlling and regulating the national markets, making sure that final consumers and their new acquired rights were protected.

However, despite all the improvements introduced in the legislation, there were still major problems to face in order to achieve the internal energy market and also existed the perception that consumers were not receiving all the benefits derived from the liberalization. Facing these problems, the Commission conducted a sector inquiry<sup>34</sup> in the electricity and gas markets in the attempt to locate the main problems and finding solutions for them<sup>35</sup>.

In the final report of the Sector Inquiry, the major shortcomings found by the Commission were<sup>36</sup>:

- High level of market concentration in wholesale markets at a national scale, similar to pre-liberalization period. Limited customer choice and constrained competitive pressure.
- Vertical foreclosure, the unbundling level was insufficient, new entrants in the market lacked effective access to the transmission and distribution networks. Operators of these networks were suspected of favouring their affiliates.
- Insufficient cross-border operations, incumbents rarely entered other national markets as competitors. Insufficient interconnector capacity, lack of adequate incentives to eliminate bottlenecks.

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<sup>33</sup> Thomas von Danwitz, "Regulation and liberalization of the European electricity market – a German view", (2006) 27 Energy law journal, pg. 439.

<sup>34</sup> Through the Directorate General on Competition, *report on energy sector inquiry* 10 Jan 2007, SEC (2006) 1724.

<sup>35</sup> Article 17 of the Council Regulation (EC) 1/2003 (EC Treaty) allows the Commission to conduct specific sector inquiries where any circumstance suggest that competition may be restricted or distorted within the common market to preserve the rules of competition laid down in articles 81 and 82 of the Treaty.

<sup>36</sup> In the Communication from the Commission COM(2006) 851 final. Section 2- The Findings, points 13 to 39.

- Lack of transparency, there was no reliable information on the markets, more information was needed for the new entrants in the market. Information asymmetry between vertically integrated incumbents and entrant competitors. Possibility of collusion due to this lack of information.
- Price formation issues, a more effective method was needed, limited trust by consumers in price formation mechanisms, adverse effects in development of competitive markets due to regulated tariffs.
- Limited competition at the retail market level, long contract duration, absence of trans-national supply offers, low level of competitive offers.

All these reasons made clear that the Second directive was an insufficient instrument for achieving the internal electricity market and therefore a new legislative solution was needed:

### **The Third Electricity Directive**

The Third Electricity Directive was adopted to overcome the deficient measures adopted by the Second Directive, this new regulation was adopted after intense negotiations on 13 July 2009, entering into force on 4 September of the same year<sup>37</sup>. This Directive sought to further liberalize the internal market of electricity, enhance competitiveness and protect the consumer, it contained a deadline to be implemented in the EU Member States, 3 March 2011.

The new rules introduced in this package specifically concerning consumer protection are contained in the chapter 3 under “general rules for organization” are<sup>38</sup>:

- Indifferent supply of energy, Member States shall ensure that all consumers are provided with energy regardless of the member state in which the supplier is registered.
- Effective consumer switching, Member States shall ensure that the consumers can switch electricity supplier, in a non-discriminatory manner, within the period of three weeks.

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<sup>37</sup> Directive 2009/72/EC of the European Parliament and of the Council, of 13 July 2009, concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, OJ L 211/55 of 14 August 2009

<sup>38</sup> Article 3 (points 4,5 7, 9, 12 and 13 ) of the Directive 2009/72/EC, of 13 July 2009, Official Journal L211/55.

- Final consumer protection, Member States shall adopt measures to protect vulnerable consumers and define energy poverty, providing the prohibition of disconnection for these particular group. Also the protection of consumers in remote areas is contemplated.
- Transparency of electricity bills, environmental impact, contribution of each generation source to the final fuel mix, information regarding consumers' rights.
- Provision of information points of contact, for issues like consumers rights, legislation and dispute settlement.
- Ensure the existence of an independent mechanism to effectively treat complaints and out-of-court dispute settlements (ombudsman).

These were the main objectives concerning consumers' protection, the novelties introduced in the Directive to protect those rights can be resumed like this:

Further and more effective unbundling regime, with three solutions to it, full ownership unbundling, independent system operator (ISO) and independent transmission operator (ITO)<sup>39</sup>. The full ownership unbundling encompasses full separation between generation activities and transmission sector, where the TSO and the network owner must be completely separated and cannot be part of a vertically integrated company. This would probably lead to the dissolution of vertically integrated big national champions<sup>40</sup>. The ISO approach where the ownership of the network assets can remain within a vertically integrated company but where the operation and maintenance of the network will be performed by the ISO, which is a totally independent entity not affiliated to the owner nor to any other undertakings active in competitive sectors of the energy market<sup>41</sup>. Since these approaches did not suit some Member States (France, Germany and Austria)<sup>42</sup>, they searched for some alternatives resulting in a third option, the ITO model where the transmission operator remains within the vertically integrated company but with the related assets under its possession, this model carries additional rules, the owner and the TSO must not share services

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<sup>39</sup> Pavle Jakovac, *"Electricity directives and evolution of the EU internal electricity market"*, (2012) professional paper, pg. 328.

<sup>40</sup> Michael Diathesopoulos, *"From Energy Sector Inquiry to Recent Antitrust Decisions in European Energy Markets: Competition Law as a Means to Implement Sector Regulation"*, (2010) pg. 4.

<sup>41</sup> *Ibidem* paragraph 39.

<sup>42</sup> Mehmet Kayikçi, *"The European Third Energy Package: How Significant for the Liberalisation of Energy Markets in the European Union?"* (2011), Pg. 13.



nor should they transfer confidential information and the managers of the TSO cannot have interests in the vertically integrated undertaking<sup>43</sup>.

The Directive also implemented a protective clause regarding the internal market, preventing unfair competition from outside the European Union, the Third Country Clause<sup>44</sup>, which requires non-EU undertakings to comply with the EU's internal regime in the event they aimed to acquire a significant share of an EU transmission network.

Where generation sector, third party access to the transmission-distribution sectors and supply sector are concerned, there are not substantial changes or novelties introduced by the Directive maintaining this way the previous regime. In the point concerning regulatory supervision from the Member States, the Directive imposes further strengthening and stricter independence of the National Regulatory Authorities, expanding their tasks and powers for this matter<sup>45</sup>.

Finally, the lack of supra-national coordination among the NRAs lead to the creation of the ACER in 2010, Agency for Cooperation of Energy Regulators, to solve cross-border conflicts and bring NRAs together in decision making and cooperation at a supra-state level. The ACER, substituted the previous group, the ERGEG (European Regulators' Group for Electricity and Gas) which had the mission of assisting the Commission in consolidating a single EU market for energy, the new agency has more power and more extensive tasks than the previous one, is an EU body with legal personality, while the ERGEG was a mere advisory group.

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<sup>43</sup> Business relations, positions of responsibility or interests. Also not have been involved in management or other relevant activities for 6 months.

<sup>44</sup> Article 11 of the Directive 2009/72/EC.

<sup>45</sup> Articles 35, 36 and 37 of the Directive 2009/72/EC.

## **SECOND CHAPTER: The (very) irregular landscape of the Internal market**

As it was commented in the previous chapter, the implementation of the Third electricity Directive was a natural and necessary step on the process towards achieving an European internal and integrated market, however this process is yet far from completion, there are still many steps to take in order to achieve the initial objectives contemplated in the European energy policies.

Although the primary objective was clear, we cannot argue that a unique and integrated European electricity market is emerging<sup>46</sup>, the main reason behind this fact, is that there are still many different electricity market models in Europe, each Member State undertook the liberalization process, departing from differing and specific individual conditions, national markets were different from one another before the liberalization process and the subsequent EU Directives, in addition these Directives did not establish a common standard for Member States concerning the liberalization, nowadays we encounter substantial differences between the different electricity markets. This fact contributes to the creation of uneven or non-standard conditions for the consumers, hindering and slowing the consecution of an integrated internal market.

To understand the current landscape, it is important to study the three principal models that existed in Europe before the liberalization, from a fully nationalized, centralized industry in France; to a structure of multiple regional monopolies in Germany; to a system of competition in the United Kingdom. These three examples represent the whole spectrum (regarding the national markets) that existed among all EU Member States when facing liberalization, making it difficult for EU institutions to find common positions for creating the Common electricity market<sup>47</sup>. Every country in the European Union had a similar market structure, with some differences of course, but the electricity markets existing at the time can be subsumed under one of the three main examples.

The freedom of choice, introduced in the First and Second Directives<sup>48</sup>, made possible for the EU countries to retain their original structures (at least in part), leading us to the landscape we can observe in today's Europe and the substantial differences from one Member State to another regarding the internal electricity market.

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<sup>46</sup> Erkan Erdogdu, "*Electricity Market Reform: Lessons for developing countries*", (2010) MPRA Paper No. 27317, Pg. 20.

<sup>47</sup> Thomas von Danwitz, "*Regulation and liberalization of the European electricity market – a German view*", (2006) 27 Energy law journal, pg. 432.

<sup>48</sup> The "*a la carte system*", *vid supra*

## The UK model

The first approach to liberalization is the UK model, the British electricity market reform has been regarded as the example that other countries should follow and as the ideal vehicle to achieve the full liberalization pursued in Europe these last 20 years, this model has been considered to be the inspiration underlying the subsequent European commission Directives<sup>49</sup>.

The UK was a pioneer country in the EU to conduct the liberalization, years before the First Directive, the market was already opened and restructured by its Energy Acts of 1983 and 1989. Now the UK electricity market is fully open and supply competition is established, counting seven major national suppliers and a high number of specialised suppliers<sup>50</sup>. Nowadays, it is a fully mature and liberalized market. One of the most important reforms introduced was the privatization of the CEGB (Central Electricity Generation Board) originally a vertically integrated undertaking, to separate the transmission sector from the generation sector, fostering the entrance of new competitors into the electricity supply industry. The generation companies were either privatized or sold (the nuclear power plants) as British Energy<sup>51</sup>.

The ownership of the transmission network remains in the hands of three companies, but operated now by a single independent TSO responsible for network planning and development, transmission is a price regulated activity with separated controls to ensure independence. A mandatory pool system was introduced in 1990, on the wholesale sector with the aim of centrally dispatch generation, but was abolished later due to its inability for effectively decrease electricity prices<sup>52</sup>. Later onwards, the Utilities Act from 2000 made possible the creation of the first wholesale trading market for electricity, which included all United Kingdom regions (Scotland, Wales and England) and that started operating on 27 March 2001<sup>53</sup>.

These steps made the British market opening favourable to the subsequent Directives avoiding collisions or resistance when implementing the new regulation. We can state that the

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<sup>49</sup> Erkan Erdogdu, "*Electricity Market Reform: Lessons for developing countries*", (2010) MPRA Paper No. 27317, pg. 21.

<sup>50</sup> Review of EU electricity markets, IPA energy consulting, 2006

<sup>51</sup> E. Erdogdu, *view supra footnote 46*

<sup>52</sup> E. Erdogdu, *view supra footnote 49*.

<sup>53</sup> Delia V. Rotaru, "*A glance at the European energy market liberalization*", (2013) CES Working papers 100-110.

liberalization involved all the elements of a full sector reform including restructuring, privatisation, regulation, and competition.

### **The French model**

The French liberalization model can be considered as the opposite of the British model, France was one of the last European countries to initiate the reform by implementing the Directives, starting in the 2000s when France approved a law to transpose the '96 Directive, France has chosen to fulfill only the minimum requirements established by the European Union in terms of deregulation<sup>54</sup>. As a consequence, this reform has not produced any major changes in the French electricity market, which has always been characterized by a strong intervention of the state with an obvious "National champion", EDF (Electricité de France), as a state-owned enterprise, with an enormous market power, over 90% of generation share where the rest is divided among its competitors<sup>55</sup>.

The reason behind this structure is that in France, energy supply has always been considered a public service obligation of the state and it fell under a specific legal regime, necessary to avoid power blackouts and guarantee the security of supply, encompassing a duty to ensure access and supply as well as the obligation to give equal treatment to all electricity buyers, particularly with regard to prices<sup>56</sup>.

However, France began to (partly) privatise the national electricity utility on 29 June 2004, facing a fierce opposition from all segments of the society, the aim was to open its capital to private investors, opening a share of 30% of the market to competition (the lowest level required by the Directive)<sup>57</sup>. The liberalization process also included the transmission and distribution sectors managed by the independent regulatory authority, CRE (Commission de Régulation de l'Electricité), an electricity trading market (Powernext) by the end of 2001 and the possibility for the consumer to choose the retailer. Nevertheless, the unbundling regime

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<sup>54</sup> Delia V. Rotaru, "A glance at the European energy market liberalization", (2013) CES Working papers 100-110.

<sup>55</sup> J. L. García Delgado, *Energía: del monopolio al mercado*, (Thomson Civitas economy collection 2006) pg. 214.

<sup>56</sup> Thomas von Danwitz, "Regulation and liberalization of the European electricity market – a German view", (2006) 27 Energy law journal, pg. 430.

<sup>57</sup> Matthias Haddenhausen, "Privatisations in Europe's liberalised electricity markets – the cases of the UK, Sweden, Germany and France", (2007) part of the Project "Understanding privatization policies: political economy and welfare effects" funded by the European Commission, pg. 19

approved consists only on a form of accounting separation between transmission and generation, essentially maintaining the vertical integration of the electricity sector<sup>58</sup>.

Despite all the small changes introduced, the level of market concentration is still very high, with a national energy model including strong state intervention and state-regulated tariffs, making France the “black sheep” of the liberalization process<sup>59</sup>.

### **The German model**

The German model can be considered the intermediate between the English and French models, in Germany there was never a proper monopoly like in France, instead, in Germany existed a regime where partly private, partly state owned companies were active in the regional markets, they were considered regional monopolies with exclusive franchise contracts covering specific supply areas and explicitly excluding competition in that zone<sup>60</sup>, giving this way a strong position and influence to the regional authorities. There was a high number of suppliers, but still, the market was not competitive due to this regional market allocation scheme. The German view of the security of supply is based on the state’s obligation to ensure an adequate energy supply, but under no obligation to supply the energy itself, that is the reason of the regional monopolies and its ownership by the Länder<sup>61</sup>.

The liberalization of the sector started in 1998 with the transposition of the First Electricity Directive, including a total market opening for the consumers and the abolition of these territorial monopolies, the federal states sold all their shares in the electricity companies and completed the privatization of the companies. The liberalization included the creation of a bilateral wholesale market in 2000, fused into one new market two years before due to the scarce liquidity present at that moment.

Germany was the only country that opted for a negotiated third party access to the networks, the model was based on agreements between energy producers and industrial

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<sup>58</sup> Erkan Erdogdu, “*Electricity Market Reform: Lessons for developing countries*”, (2010) MPRA Paper No. 27317, pg. 22.

<sup>59</sup> Sophie Meritet, “*French perspectives in the emerging EU energy policy*”, Energy policy, Oxford Elsevier, pg. 2.

<sup>60</sup> Thomas von Danwitz, “*Regulation and liberalization of the European electricity market – a German view*”, (2006) 27 Energy law journal, pg. 427.

<sup>61</sup> *Ibidem* pg. 429.

consumers, failing to guarantee a non-discriminatory access to the transmission networks, abandoning this model with the Second Directive and establishing a regulated access<sup>62</sup>.

Despite the full opening, the vertical unbundling of the incumbent operators was a “forgotten point”<sup>63</sup> of the liberalisation, nowadays, there is not a proper sector separation, the biggest incumbents (there were eight, now remain four) are involved in all sectors of the electricity market (high degree of vertical integration), this fact and the reduction on the number of electricity operators have increased the concentration on the internal energy market, maintaining a high level of market share, preventing competition and keeping barriers for new entrants and investments<sup>64</sup>.

### **Consequences**

With these historic precedents in mind and the fact that the successive electricity directives were flexible and introduced several options for Member States to choose from, the European liberalization has been an irregular process that is still on progress, these facts create uneven conditions for consumers, differing from one State to another. There are several negative consequences created by these conditions that hinder the construction of a proper internal market.

The European Commission has identified some of these negative consequences caused by the variations on the Member States’ regulation. The ideal landscape for energy prices would be to let pure competition between incumbents determine the amount paid by household consumers and industrial consumers, but there are still many Member States where price regulation is a reality, as a consequence of the laxity of the Directive’s regulation, affecting the consecution of a competitive market, in countries like France, Portugal, Denmark, Estonia, Spain and Poland the regulated prices for electricity reach both industrial and household consumers equally, hindering effective competition and price determination.

According to the European Commission data, there is still a very high level of concentration in retail electricity markets<sup>65</sup>, fact that affects competition and the possibility of

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<sup>62</sup> Matthias Haddenhausen, *“Privatisations in Europe’s liberalised electricity markets – the cases of the UK, Sweden, Germany and France”*, (2007) part of the Project *“Understanding privatization policies: political economy and welfare effects”* funded by the European Commission, pg. 15.

<sup>63</sup> J. L. García Delgado, *Energía: del monopolio al mercado*, (Thomson Civitas economy collection 2006), pg. 207.

<sup>64</sup> Erkan Erdogdu, *“Electricity Market Reform: Lessons for developing countries”*, (2010) MPRA Paper No. 27317, pg. 22.

<sup>65</sup> Above 5000 points in the Herfindahl-Hirschman Index. European Commission data *“making the internal energy market work”*.

new entrants to the market, countries like Portugal, France, Italy, Greece and Estonia, present these high levels of concentration, single energy producers control over 50% of the markets in as many as 11 member states in six countries single producers are near monopolists, holding more than 80% of market share causing unequal pricing across Europe<sup>66</sup>, this fact affect consumer pricing as a direct consequence of the uneven implementation of the Directives. Market regulation is being driven by national decisions, with the effect of maintaining closed national markets and subverting plans for greater cross border competition<sup>67</sup>.

These consequences are a mere example of the irregular landscape introduced by the directives and show the failures of the regulation, the most affected by these failures are the final consumers whose conditions are not standard in this “alleged” single market, further detail on the effects on consumers will be introduced in the next chapter.

### **The Spanish problem**

To further assess the irregularity of the European energy market, mentioning the Spanish example is a necessary step on the process. Spain is without a doubt, one of the Member States where the implementation of the Directives has utterly failed, creating this way a detrimental system with huge shortcomings that affect consumers gravely. The problem does not reside on the suitability of the European legislation itself but on the inadequate regulation of the national electricity sector carried out by the Spanish authorities, it has proven to be inefficient and insufficient up to this day, as it will be demonstrated.

Spain is not an exception in the liberalization and privatization process, it started in 1997 with a law to transpose the First Directive to the national market, establishing the base for the liberalization mandated by the European institutions, introducing partial competition in the generation and commercialization sectors<sup>68</sup>. The objective was to fully open the energy markets and switch from a monopolistic market to a competitive and open one, with all the benefits it encompasses. The Third Electricity Directive has been effectively transposed to national legislation and has been totally valid and introduced in the national system for some years already<sup>69</sup>. Spain has had both the electricity and gas markets fully opened since the

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<sup>66</sup> Jerzy Buzek, “*the many steps EU governments must still take if the internal energy market is to work*”, (2013) opinion collected in discussion paper, ‘EU’s internal energy market: Tough decision and a daunting agenda’, pg. 15.

<sup>67</sup> Hans ten Berge “*What EU governments must do to get the internal energy market right*” (2013) opinion collected in discussion paper, ‘EU’s internal energy market: Tough decision and a daunting agenda’, pg. 61.

<sup>68</sup> X. Vives, “*Energy Regulation in Spain: From Monopoly to Market*”, (2010) Thomson Reuters, pg. 220.

<sup>69</sup> Real Decreto-ley 13/2012, transposing Directive 2009/72/CE relating electricity markets.

transposition of the Second directive<sup>70</sup>, the TSO designed to operate the transmission networks is fully independent and operated by a separated undertaking (full ownership unbundling) elected by the Government<sup>71</sup>. Additionally, DSO legal unbundling is provided, including management separation and measures relating to effective decision-making rights<sup>72</sup>. The Government also created an independent National Regulatory authority (CNE), recently integrated under the National Commission of the Markets and Competition (CNMC)<sup>73</sup>. Also, consumers right to switch electricity supplier is fully recognised since before 1 July 2003, and all the other consumer rights recognized by the directives are valid within the Spanish territory. Furthermore, Spain and Portugal created a common wholesale electricity market (MIBEL) to increase cross border transactions and interconnection between both countries with the objective of benefiting all consumers residing in the Iberian peninsula.

At first sight, the Spanish model appears to be the standard model desired by the Directives and the European energy policies, not very far away from the ideal English model, but the actual reality is much different from the image projected by this data, under this apparently right façade, a myriad of problems underlay, affecting consumers gravely in many ways.

To assess this affirmation, first thing to do is contribute with some data to clarify the Spanish electricity market problems. The Spanish biggest problem related to the electricity liberalization is a tariff deficit that has been progressively accumulating since the year 2000 and that so far, amounts to a total of 25,5 billion euros<sup>74</sup>, raising this figure an average of 4 billion euros<sup>75</sup> each fiscal year. This data is well acknowledged by the Spanish government and the NRA<sup>76</sup>, but despite their efforts to mitigate it and decrease this massive hole in the economy, nothing has seem to work so far, even though the government has introduced multiple measures to stop this tendency, such as increasing the consumers' levies and charges in their final bill, the deficit does not seem to decrease. This problem goes far, the data shows

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<sup>70</sup> 100% market opening for both markets, data source EU Commission Report on the Implementation of the Gas and Electricity Internal Market (2005) .

<sup>71</sup> Red eléctrica de España S.A.

<sup>72</sup> Report "*Spanish's energy regulator's national report to the European Commission 2013*" 18 July 2013 pg. 22.

<sup>73</sup> Originally National Energy Commission, since the 7 October 2013, its activities and functions are integrated under the Spanish competition regulatory organ.

<sup>74</sup> Latest data recognised by the NRA up to 31st December 2012, Report "*Spanish's energy regulator's national report to the European Commission 2013*" 18 July 2013.

<sup>75</sup> CMNC (Spanish competition authority) data for deficit raise in 2013, 3.682 million euros.

<sup>76</sup> CNE's own statement "*So far the tariff deficit has been the main barrier to the development of competition in retail electricity markets*", contained in CNE report on the development of competition in gas and electricity markets 2006-2008.



that prices paid by final consumers have increased over 70% in the period from 2006-2012<sup>77</sup>. According to Eurostat data, Spain is ranking among the first positions of European electricity prices for domestic consumers before taxes, paying a 30% above EU average electricity prices<sup>78</sup>.

To begin understanding the size of this problem, mention is needed, that Spain, among other European countries, such as Italy or France, have a system of institutionally regulated tariffs. These tariffs are artificially regulated at a lower price than the real one existing on the market, having therefore a potential distortive effect that may prevent retail companies from competing in the liberalized segment of the market, hindering the creation of a competitive market<sup>79</sup>. The Commission has analysed the effect that these tariffs can have on the market, and has initiated a number of State Aid procedures to verify and amend the potential distortive effects of these measures<sup>80</sup>. This “regulated” price of the electricity is not always cost-oriented, causing as a result the difference between the regulated tariffs and the cost that should be paid by customers in the liberalised segment of the market, giving origin to the deficit.

Although the tariff deficit is a tremendous problem for the Spanish economy, it is not but a symptom of a more concerning and deeper problem: the Spanish electricity sector regulation is inadequate and insufficient, further reforms in the legislation are much needed and in the future, the deficiencies of the system will do nothing besides continue growing, as the European energy policies continue advancing and developing. The potential sector reform should guarantee a system where the current situation is never repeated and all consumers are well protected against unfair prices caused by a deficient system<sup>81</sup>.

First, I have to remark that frequently, tariff deficits are defined as the differences between the electricity costs and the price paid by final consumers, this is the “standard” economic deficit, but this is not the Spanish case, the Spanish case responds to a “regulatory” deficit: the difference between the recognized electricity costs<sup>82</sup> in the regulatory regime and

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<sup>77</sup> Natalia Fabra, Jorge Fabra: *“El déficit tarifario en el sector eléctrico Español”* (2012) 134, Papeles de economía Española, ISSN: 0210-9107, pg. 88.

<sup>78</sup> Source: Eurostat data 2012 Electricity price for domestic consumer before taxes (€/MWh).

<sup>79</sup> M. Marañón, A. Morata, *“Tariff deficit in retail electricity markets in Spain”*, (2011) Network industries quarterly vol. 13, pg. 23-26.

<sup>80</sup> Opened in depth investigations of state-aid cases for Spain and France in January and June 2007 on the regulated electricity tariffs.

<sup>81</sup> Natalia Fabra Ibidem paragraph 77.

<sup>82</sup> These costs have been higher than expected, the costs of generation and transport are not covered by the total income.

the regulated tariffs paid by the consumers, nevertheless some authors consider this deficit as an amount of wealth that electric companies have not yet cashed in<sup>83</sup>.

Either way, both opinions are valid because they represent, in part, the underlying reality behind the deficit. There are many factors that contribute to this deficit, the first one and more clear of all is the progressive increase of the fixed regulated costs, which are called “associated costs” and do not respond directly to the costs related to production, distribution or commercialization of the electricity (those are established in the wholesale markets). They amount to around 45% of the final bill paid by consumers, and they include: national carbon subsidies (because it is non-competitive against other fuels like gas or imported carbon); costs related to territorial policies (subsidies received by electricity generators in the peripheral islands), to ensure that island electricity consumers pay same prices as the peninsular consumers, because generating energy in the islands is more costly; annual fees to finance previous years’ deficit, whose justification lies in the maintenance of the industry competitiveness and finally, premium fees for the special regime<sup>84</sup> to maintain the renewable energy compromises acquired with the European Union. There has also been an increase on the taxes paid by consumers, 3% increase in the VAT and 5% in the electricity direct taxes, which has also contributed to make the electricity bill more expensive.<sup>85</sup>

The European Commission affirmed in 2012 *“Weak competition in the energy sector has contributed, at least partly, to building the tariff deficit by favouring overcompensation to certain utilities, such as nuclear and large hydro power generators which have already been paid for”*<sup>86</sup>. This affirmation, reveals an additional part of the issues causing the deficit, overcompensation of nuclear and hydro power stations, these generators are not as efficient as they should be in a competitive situation (historically they were underperforming stations), the cost of producing electricity is higher for these stations, but in the end, the price per MW/h sold in the wholesale market will be the same for all producers, irregardless of the origins of

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<sup>83</sup> These costs have been partly assumed by the electric companies, but expected to be paid by consumers in the end, F. Blanco; S. Bao, *“The electricity reform pending: proposal for a compromise solution between green electricity and the amortization of deficit of tariff”* (2013) 209 Boletín de Estudios Económicos, Pg. 329-330.

<sup>84</sup> This “special regime” is the one destined to foster the development of renewable energies and their inclusion in the competitive market by helping them with temporary incentives, they have high costs that would drive them off the competitive market, but these are clean ways to produce electricity, making them socially desirable. Small hydro, solar, wind and biomass among others.

<sup>85</sup> Carlos Sallé Alonso, *“El déficit de tarifa y la importancia de la ortodoxia en la regulación del sector eléctrico”* (2012) 134, Papeles de economía Española, ISSN: 0210-9107, pg. 102.

<sup>86</sup> Commission Staff working document, ‘Assessment of the 2012 national reform programme and stability programme for SPAIN’ (2012), SWD(2012) 310 final, pg 26.

the electricity, this fact makes these producers totally dependent on Government funding because otherwise, it would have been impossible for them to make a profit of their activities or even recover the initial investment costs in the competitive market, furthermore, these producers received additional funding to which they were not entitled, exceeding the limits imposed by the Law and exceeding as well the original cost of the inversion by far (therefore, the overcompensation), augmenting the deficit in several thousands of millions. Furthermore, the access to these particular methods of producing electricity is nowadays protected by two indirect barriers, the nuclear moratorium<sup>87</sup> and the inexistence of additional profitable hydric resources, these barriers have the effect of precluding the entrance of new competitors in the nuclear and hydro sectors (or at least they make it really difficult), making impossible for the overcompensation to be diluted by the effect of competition. The concessions for the exploitation of these technologies (made under a different regime, before the liberalization), averted risks for the investors and prevented competition between them, therefore, the benefits resulting from the subsidized production, were never earned or disputed in a competitive situation, causing this way a breach between the prices of producing electricity determined by the competition in the market and the real costs of producing it in these stations<sup>88</sup>.

Other factor that has contributed to cause a distortion in the cost of the electricity supply is the strong investment in renewable energies that Spain has made in the last years. This increase in the cost is not necessarily negative (unlike the ones explained above), renewable electricity generation sources are very desirable (and the future of generation), thus, fostering investments in this field actually helps to develop the technology (making it more efficient), consequently, reducing the costs of installation and generation, leading to a general benefit for consumers. The negative point concerning Spain and the renewable energies is that the legislator and regulators miscalculated the amount of investment and production capacity needed in Spain. Historically, there was poor investments in renewable energies, and Spain was far behind the objectives contracted with the European Union in the matter of renewable generation capacity. The drop in inversion costs in green energies and the low credit cost led to exceed, in a short period of time, the objectives concerning installed power, e.g. in solar power the objective was 400 MW for 2010, reaching 3.501 MW by the end

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<sup>87</sup> The moratorium paralyzed the construction of new nuclear plants, the electric bill includes a fee to compensate the big electric companies for the enormous expenditures made in order to start building new plants, which never were operational due to the cancellation of the permits by the Government.

<sup>88</sup> Natalia Fabra, Jorge Fabra: *"El déficit tarifario en el sector eléctrico Español"* (2012) 134, Papeles de economía Española, ISSN: 0210-9107, pg. 90 to 92

of the period designed to achieve it. Nevertheless, the total mix of renewable energy generation is still under the negotiated thresholds, and these generators are still not as price competitive as conventional generators, they still need state funding to remain competitive. There is a discussion going on about the incentive mechanisms for these technologies and whether this costs should be included in the final consumer tariff or if they should be financed by other mechanisms (at least partly) outside the tariff and separated from the consumers, this way, there would be a significant reduction on the final price<sup>89</sup>. Nevertheless, consumers have not perceived any benefits (like tariff reductions) from the progressive decrease in the renewable energy costs. If the regulation would have allowed flexible tariffs instead of the existing fixed ones, the improved efficiency could have been translated to consumers and the final tariff would have been cheaper<sup>90</sup>.

These are the main relevant issues (but not the only ones) relating the problems and elevated costs of the electricity tariff in Spain, and they have no easy solution. The enormous amount of debt incurred so far is hindering the development of new energy policies and it is a huge liability for the economy, the main efforts of the Spanish authorities should aim to reduce drastically the amount of deficit as a necessary step to achieve a more competitive energy market. There have been several attempts to palliate this situation, apart from the transposition of the EU Directives, there have been many other legislative initiatives, e.g. five successive Decrees<sup>91</sup> aimed to reduce the fixed “non-related” costs, with little success so far, these regulations have achieved a reduction of the yearly tariff increase (it would be much higher than it already is, about 8 Billions) but nothing else. The government has carried additional initiatives to reduce the tariff, like the transfer of some of the fixed costs from the electricity sector to the annual general state budget, e.g. the insular costs and part of the renewable premium fees, this may help reduce the electricity bill, but the cost is still there and all the citizens contribute with their taxes to the State budgets, so there is not a real reduction, but a transfer of the costs, still finally paid by the citizens<sup>92</sup>.

The solutions to the Spanish problem must be addressed differently, first of all, a new model is required, getting rid of the regulated tariffs would be the first step, letting the free market and the competition determine the final prices; eliminating the associated costs, not

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<sup>89</sup> Carlos Sallé Alonso, “*El déficit de tarifa y la importancia de la ortodoxia en la regulación del sector eléctrico*” (2012) 134, *Papeles de economía Española*, ISSN: 0210-9107, pg. 104 to 106.

<sup>90</sup> Natalia Fabra, Jorge Fabra: “*El déficit tarifario en el sector eléctrico Español*” (2012) 134, *Papeles de economía Española*, ISSN: 0210-9107, pg. 92 and 93.

<sup>91</sup> RD-ley 6/2009, RD-ley 6/2010, RD-ley 1/2012, RD-ley 12/2012 and RD-ley 20/2012.

<sup>92</sup> Natalia Fabra, Jorge Fabra, *op. cit.*, pg. 95.

related directly to the electricity generation, transport or distribution; adjusting the real costs of generation and the prices paid by final consumer to avoid incrementing the tariff deficit; finding a new way to finance and finally get rid of the deficit, instead of charging it to consumers; better planning to ensure that legislative instruments are truly efficient and not just mere patches, seeking full compliance with the European compromises relating renewable energies (European Energy roadmap, objective 2020) and emissions reduction.

Although this is not but the tip of the iceberg, it can be observed that Spain has still a long way to go, as far as the electricity market is concerned, to become more competitive and fair to national consumers and to comply with the European energy agenda. A drastic change in the legislation and the energy policies is the next step on the road, otherwise, a proper liberalized energy market will never be achieved and Spain will always stand behind its European peers, affecting not only the national economy but the whole European Union Common market objective.

Additionally, the European Internal Market is not free from problems, the diversity or regimes for the electricity market has made the process of liberalization quite difficult, and there are still many steps to take in order to consider the EU as a common market. Nevertheless, the objectives are clear and every Member State is taking the necessary steps to achieve the goals set by the European Institutions. The next step in the process are the objectives set in the European energy policy strategy for 2020, to secure the future, continue making the European economy competitive and comply with the various climate objectives set forth. They are tough challenges ahead and a lot of effort and capital will be needed to overcome them, but the rewards will be: a cleaner, more competitive and energy efficient Europe, with lower energy prices, less dependence form external energy sources and lower carbon emissions<sup>93</sup>.

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<sup>93</sup> Energy 2020, 'A strategy for competitive, sustainable and secure energy' Com(2010) 639 final.

### **THIRD CHAPTER: Additional issues derived from Liberalization concerning Consumers.**

As we have seen in previous chapters, the Energy market liberalization has introduced numerous benefits for consumers, with the objective of enhancing the welfare of European citizens. The EU energy market legislation has set high standards of public service obligation and consumer protection across the European Union. The European measures are complemented by national and local initiatives such as energy subsidy schemes and wholesale markets which contribute substantially to efficiency improvements, without the cooperation of Member States, this level of consumer protection and benefits would have never been achieved. However, as it has been explained above, some of these national and local measures have not worked as well as expected and instead of contributing to improve consumer welfare, they produced the opposite effects, e.g. fixed electricity tariffs for consumers, led to a huge capital deficit in Spain, while in other countries hindered competition and choice options<sup>94</sup>.

Despite having introduced many benefits for consumers, the liberalization has had a negative side and the objectives pursued by the European energy policies are not yet fully accomplished, there are many difficulties affecting the Internal Energy Market, as will be exposed below.

One of the principal policy objectives of the European Union in their journey to achieve an Internal Energy Market in energy has been focused on fostering competitiveness in the energy market, and this way, reducing the energy prices and making the electricity cheaper for households and businesses, every Member State has pursued this objective understanding it as the most desirable consequence of the market liberalization<sup>95</sup>, this policy objective has been present during the whole process, inspiring every normative effort and underlying in every step taken towards the liberalization.

#### **High Energy Prices**

However, the objective of achieving a cheaper electricity has not been fulfilled yet, instead, it can be observed that nowadays, electricity prices not only have not decreased, but instead, they have risen progressively in the last years. This is not an isolated tendency, it affects the whole Europe Union and every Member State that is part of it. Looking at the period between 2008 and 2012, nearly every EU Member State has seen a progressive and

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<sup>94</sup> Commission Staff working paper, 'An energy policy for consumers', SEC(2010) 1407 final, pg. 3.

<sup>95</sup> Energy challenges and policy, 'Commission contribution to the European Council of 22 May 2013'. Pg. 1.

steady increase in household and industrial electricity prices<sup>96</sup>. On average, the EU household electricity prices have increased by more than 4% a year, in the period between 2008 and 2012 alone, in some countries this rate is higher than in others (up to 10% increase each year in Spain, Latvia and Cyprus). Concerning the industrial electricity prices, (excluding VAT and recoverable taxes), they have risen an average of 3.5% per year<sup>97</sup>, in the vast majority of countries this increase in the prices was higher for households, this fact reflects the level of competition and maturity present in the markets, being more developed the industrial market (as it was the first one to be liberalized), it is more directly linked to wholesale prices as a consequence<sup>98</sup>. And even though this is a global trend affecting all Member States, it is also a fact that, despite the efforts towards the creation a single EU market for energy, retail price conditions remain persistently different across borders, meaning that there is no uniformity in energy prices amongst Member States, the reason for this is the existence of a variety of markets where price dispersion remains high for electricity<sup>99</sup>, depending on where a customer lives in Europe, the price that customer has to pay per kWh of electricity can vary by as much as 120%<sup>100</sup>. This fact can be explained by the retail price regulation regimes, competition levels in the different retail markets, network charging methodologies in use by NRAs at the TSO/DSO level and different levels of taxation regimes. In most countries, high prices are driven by taxation and network charges, no harmonised approach in Member States' retail markets could be found across Europe (as exposed in the previous chapter)<sup>101</sup>.

Other curious fact is that, in the majority of the Member States, the energy component is not the most significant part of the energy bill, representing less than half of the final price paid by consumers, with taxation, renewable support schemes and network costs accounting for the remainder, European consumers are actually paying more for the "associated costs" (network costs and taxes) in the electricity bill than for the electric energy itself, in my personal opinion this situation is totally irrational and the energy should be the major part of the electricity bill, the network costs can be assumed, they are necessary to maintain the power lines and deliver the electricity to the final consumer and the majority of those costs cannot be avoided, but I think that the taxation levels and renewable support schemes included in the final consumer bill are excessive, they are affecting consumers by

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<sup>96</sup> Median household consumer band with annual consumption between 2 500 and 5 000 kWh per year. Prices are measured in cents EUR / kWh.

<sup>97</sup> Commission Staff working document, 'Energy prices and costs report', SWD(2014) 20 final/2, pg. 9.

<sup>98</sup> ACER/CEER 'Annual Report on the results of monitoring the Internal Electricity and Gas markets in 2012', (2013) pg. 24.

<sup>99</sup> Commission Staff working document, *op cit.*, pg. 7.

<sup>100</sup> Christophe Domacque, 'European Residential Energy Price Report' (2013) VaasaETT, pg. 10.

<sup>101</sup> ACER/CEER Annual Report, *op cit.*, pg. 57.

increasing the electricity bill and hindering the consecution of the policy objective of lowering prices, they should be reduced or financed through alternative mechanisms<sup>102</sup>.

### **The Economic Crisis**

Additionally, the economic crisis that started several years ago, has definitely worsened consumers' situation, it has been deemed to have led to a significant increase of energy poverty in Europe, studies show that 50 to 125 million people suffer from it<sup>103</sup> (even though there is no consensus on what actually constitutes energy poverty), this crisis has also carried severe consequences in terms of gross domestic product (GDP) contraction and record-high unemployment rates that have swept away the expectations of economic growth<sup>104</sup>, leading to major distortions in the European energy policy, putting them under serious threat. The crisis has also created an oversupply situation resulting mostly from the decrease in electricity demand and the rapid deployment of renewables, this situation of oversupply can be explained because in the period before the economic crisis, the electricity demand rose steadily in the years following the liberalization, however, when the crisis struck Europe in 2008, the energy demand fell for the year 2009 by a 4,6%, recouping a moderate amount in the next years, but without recovering the previous level of demand achieved in 2008, where the peak of European energy demand was reached<sup>105</sup>, electricity producers expected this rise in the demand trend to continue (nobody expected the crisis), building for this purpose, new generation plants to cover the expected increase and ensure supply, this led to an excess of generation capacity that was not absorbed by consumers, giving origin to the oversupply situation and the subsequent sharp decrease in the wholesale electricity prices, this situation and the decrease in the electricity wholesale prices, also has caused that a big part of the generation units resulted no longer profitable; at the same time, the increasing electricity bills (renewables subsidies, taxes) have led to the aforementioned energy poverty and limited European households' disposable income<sup>106</sup>. All this factors have led to a very dysfunctional situation, putting the European Energy Market in danger, despite its many accomplishments, threatening customer welfare and the competitiveness of the industry<sup>107</sup>.

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<sup>102</sup> ACER/CEER 'Annual Report on the results of monitoring the Internal Electricity and Gas markets in 2012', (2013) pg. 25 and 27.

<sup>103</sup> EPEE, 'Tackling fuel poverty in Europe', Recommendations guide for policy makers (2009).

<sup>104</sup> Commissariat général à la stratégie et à la prospective: "*The Crisis of the European Electricity system, Diagnosis and possible ways forward*" (2014), République Française, pg. 9 onwards.

<sup>105</sup> ACER/CEER Annual Report *op cit.*, pg. 20.

<sup>106</sup> Commissariat général à la stratégie et à la prospective, *op cit.*, pg. 10.

<sup>107</sup> Ibidem, *op cit.*, pg. 21 onwards.



## **European Energy Generation, the rise of Renewable Sources**

Focusing on further specific factors that have contributed to increase the electricity bills, mention is needed that, nowadays, Europe is not producing enough energy to cover its own demand, the reality is that Europe is highly dependent on external imports for oil, gas and coal. This need is far from decreasing, instead it is expected to grow more than 80% in the case of oil and gas by 2035, while other economic giants like the US are reaching the point of transition between being net importers to becoming net exporters (in the gas and electricity generation industry thanks to the shale gas revolution), Europe's development has stagnated, causing an erosion in the competitiveness and energy prices<sup>108</sup>. It is clear that Europe is dependent from external energy sources, furthermore, fuel costs represent a very significant part of the variable costs of generating plants that use these fuels, therefore, the prices of external imports are intrinsically linked to the final prices of electricity, and these fuel prices exert pressures and influences on the final European electricity prices<sup>109</sup>. Taking into account that the EU-27 power generation percentages for 2012 were: 16.5% for Hard Coal, 10.3% for Lignite, 17.6% for Natural Gas and 2.2% for Oil<sup>110</sup>, it can be observed that, due to the importance and amount of usage of these fuels in Europe's electricity generation, significant changes in the import prices for these fuels, will have a clear effect on the electricity generation costs, it can be observed that the price of these fuels is a determinant in final electricity prices. There are several studies showing that the start of the increase in fuel prices, generally coincide with a rise in end user electricity prices (for both households and industrial users), given the importance in the total European generation mix, global trends in fuel prices have a significant impact on consumers electricity prices<sup>111</sup>.

Historically, the annual average prices of crude oil (Brent), coal (EU steam coal imports as reported by the IEA) and gas (German border) have increased from two to five times, and the wholesale electricity prices moved in line with the prices of crude oil and natural gas<sup>112</sup>, this trend can help explain the progressive increase in electricity costs for end-users in the last years, since a rise in the electricity production costs is directly reflected in the final price paid

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<sup>108</sup> Energy challenges and policy, 'Commission contribution to the European Council of 22 May 2013'. Pg. 2

<sup>109</sup> ECME Consortium, 'The functioning of retail electricity markets for consumers in the European Union' (2010) Final Report, EAHF/FWC/2009 86 01, pg. 326

<sup>110</sup> IEA Coal Industry Advisory Board, 'The Impact of Global Coal Supply on Worldwide Electricity Prices', Table 2 pg. 14.

<sup>111</sup> Ibidem footnote 109.

<sup>112</sup> Market Observatory for Energy, 'Price developments on the EU retail markets for electricity and gas 1998 – 2011', pg.2.

by consumers. However, as mentioned above, nowadays, Europe is facing an oversupply of energy, making wholesale electricity prices plummet, this fact should be reflected in the final electricity price, making it cheaper, but up to today, this has not yet happened, the decrease in prices have only been partly translated into retail prices<sup>113</sup>. The explanation for this fact can be that, even though, the progressive increase in fuel prices drove the increase on electricity prices in the past years, nowadays, the coal price has been falling since the beginning of 2011<sup>114</sup> (in part because of the discovery of reserves of shale gas in the US, making the need for coal decrease vastly in this country, transferring the surplus offer to other regions like Europe), as of today, the costs of hard coal as input energy in Europe are much lower than natural gas, making it cheaper to produce electricity in carbon powered stations, producing as a consequence, a switch from gas powered generation to coal powered ones<sup>115</sup>; this fact, should have contributed to lower the final consumers' electricity bill, it is a matter of common sense, lower costs of producing electricity lead to lower prices paid, but the data available contradicts this affirmation, prices for household and industrial consumers remain high and the general tendency is that these prices will continue to rise in the next years.

The main reason for this resiliency of high prices, is due to the costs of the renewable energy support schemes, externalised from the electricity market and added through levies and taxes to the final consumer bill, support costs for renewable energies in Europe have risen to more than 30 billion Euros in the year 2012 alone<sup>116</sup>, renewable energies have also received priority access to the electricity markets, causing a displacement of other technologies<sup>117</sup>. Additionally, since the renewable energies are subsidized (by "out of markets" arrangements, feed in tariffs) and they have a guaranteed fixed power price per MWh produced (irrespective of the price set by the market), they are immune to operational incentives conveyed through power prices, this means, that renewable producers do not have incentives to produce and sell electricity when it is most valuable to the system, the so called "balancing the system", leaving the costs of this balancing to conventional generators. Producers are protected or incentivized to continue producing, even when the system is already oversupplied, leading in some cases to significant distortions in power price dynamics, like negative power prices, because for them, is more profitable to continue producing than turning the plant off, even if there is an excess of

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<sup>113</sup> Commission Staff working document, 'Energy prices and costs report', SWD(2014) 20 final/2. Pg. 120.

<sup>114</sup> *Ibidem* pg. 175.

<sup>115</sup> IEA Coal Industry Advisory Board, 'The Impact of Global Coal Supply on Worldwide Electricity Prices', pg. 20.

<sup>116</sup> Commissariat général à la stratégie et à la prospective: "*The Crisis of the European Electricity system, Diagnosis and possible ways forward*" (2014), République Française, pg. 10, 11 and 25 onwards.

<sup>117</sup> *Ibidem* pg. 70 onwards.

production at that point in time, making other plants shut down instead to balance the system. The mechanism these renewable producers use to remain online, is the negative bidding, to lower energy production prices to a negative level, so that some competitors have to switch off in order not to lose a lot of capital by staying connected, negative prices usually reflect operational constraints, but the feed in tariffs amplify this issue, making renewable producers immune to price signals. This fact can lead to system inefficiencies and increase the costs for consumers<sup>118</sup>.

While the renewable energies continue growing and gaining weight in the total fuel mix of the European Union (objective 2020), substituting the traditional energy generators for a more eco-friendly and “cheap” alternative, retail prices will continue to increase as the time passes (because they will receive increasing incentives to support this policies), at the same time, the wholesale prices will continue decreasing due to the issues exposed above, resulting in the mothballing or decommissioning of more and more power plants, specially gas-powered ones, investments in the gas field production have also been reduced because of the higher costs than coal. To put things in perspective, the energy price gap between the EU and its major economic partners (USA, Russia, China and Japan) has increased substantially for both household and industrial costs, putting Europe in a difficult position, with serious concerns about the loss of competitiveness against the other economic regions, being the energy costs a crucial factor of the determination of this competitiveness (industries and general production are affected), this fact has the ability of leading to adverse effects on the economy, depressing EU growth and future investments<sup>119</sup>.

These factors, apart from rising electricity prices, introduce further concerns, some authors believe, that because of the mothballing and closure of non-profitable energy stations, the security of supply is threatened; renewable energy production is great, but it suffers from a major flaw, because the generation plants are subject to the intermittency of the climate conditions, and unlike traditional power plants (the fuel powered ones), they are unable to produce energy continuously, the rise of these technologies in the fuel mix introduces the possibility of the security of supply to be affected by this intermittency, if they do not have the support of other producing plants (the ones progressively retreating) to ensure a steady stream of electricity<sup>120</sup>. This is why a balanced energy policy and the search for solutions are

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<sup>118</sup> Commissariat général à la stratégie et à la prospective, *op cit.*, pg 95.

<sup>119</sup> Commission Staff working document, ‘Energy prices and costs report’, SWD(2014) 20 final/2. Pg. 189 onwards and 201.

<sup>120</sup> Commissariat général à la stratégie et à la prospective: “*The Crisis of the European Electricity system, Diagnosis and possible ways forward*” (2014), République Française, pg.70.

needed at this point, it is of crucial importance to maintain environmental policies and the support of decarbonisation in the European Union, but also the competitiveness and security of supply need to be protected at the same time<sup>121</sup>. In the short term, problems concerning the security of supply (one of the main policy objectives) will be the ones that most likely will affect consumers more gravely, meanwhile, environmental problems will not be a bigger problem until some time has passed and they do not constitute an imminent problem yet, nevertheless they are both equally important in the long run. The European Union and the Member States are facing an important challenge under these conditions, a possible solution for this problem, according to some scholars would be, the implementation by national governments of an European capacity mechanism in a coordinated way, technology neutral and transparent supported by a common framework set by the Union to tackle the problems exposed and guarantee resource adequacy and security of supply in the long term<sup>122</sup>.

### **Customer Switching**

Finally, there is another additional issue that can affect the amount of the bill that a customer pays for the electricity supply, even though this factor is not as direct as the ones explained above, it has certain relevance and definitely has some influence in the prices paid by households. This factor is the consumer ability of switching energy supplier, prerogative introduced as a consequence of the full opening of the European energy markets that allows customers to actively seek better deals concerning energy supply, this right was a part of the energy policies contemplated in the Directives. Consumer switching is an important activity that allows consumers to benefit from better deals and promote competition in the retail electricity markets, distributors and retailers have to compete in order to attract the highest possible number of customers and prevent their current customers from switching to another supplier due to better conditions. The liberalization produced an effect of expansion in the number and range of different alternatives offered to the customers, now each customer is able to find the most suitable offer or energy plan in the market for their particular electricity usage, the adaptability has increased to benefit consumers<sup>123</sup>.

The Directives recognized the potential power and influence that consumer switching held relating to competition and final prices, for that reason, they established a number of mechanisms to protect consumers and promote their switching attitude, e.g. they established

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<sup>121</sup> *Ibidem*, pg. 116.

<sup>122</sup> *Ibidem*, pgs. 13, 34, 60 and 116.

<sup>123</sup> ECME Consortium: 'The functioning of retail electricity markets for consumers in the European Union' (2010) Final Report, EAHC/FWC/2009 86 01, pg. 73

that consumers must be able, not only to switch supplier, but to do it in an easy way and within a period of time of three weeks (this period is already implemented in the majority of Member States); abolition of charges for consumers during the whole switching process; protection for vulnerable consumers exposed to the risk of “energy poverty” (even though there is no uniform definition for both of these terms) and several mechanisms to monitor and handle consumer complaints by the NRAs as well as effective dispute settlements measures<sup>124</sup>.

However, the Commission found that actual market conditions (limited transparency and limited access to information, complicated switching procedures) contradict the provisions contained in the Directives and they make it quite difficult for European consumers to compare offers and switch to cheaper and more favourable tariffs. The importance of this switching options are obvious to the Commission, there is an estimation of potential average saving by switching of 13 billion Euros per year at EU level (which is a very high amount of capital savings), however, it also recognizes that this option is not yet fully exploited by the consumers and EU wide switching rates are rather low, as the data will show. It is also worth mentioning that due to the low price elasticity of electricity, consumers must be incentivised by a significant price variation to consider switching, a low price saving in the monthly or yearly tariff may not be enough to promote consumer action (expected prices from switching have to be substantial), this fact can also help explain to some extent, why switching rates tend to be low<sup>125</sup>. This significant price variation will be different between Member States due to the differences in each country’s electricity bill breakdown, and it will definitely have more importance in countries where the energy component is a bigger part of that electricity bill, since the part of the final price that consumers can potentially influence by switching supplier represent a higher percentage in that Member State’s electricity prices, e.g. the potential savings are much more elevated in Malta where the electricity component amounts to 84% of the bill than in Denmark, where the electricity is merely a 21% of the final price. Since all consumers have to pay the same proportional amount of network costs and taxes with no possibility of modifying them, the only factor they can influence to reduce the price paid in the electricity bill, is the energy cost by switching to a cheaper supplier. The switching rates present in a specific market, also help provide useful information on the level of competition present in that market, there can be several interpretations for different levels of switching rates, a high level can be a sign of adequate consumer awareness and competition, or the

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<sup>124</sup> ACER/CEER ‘Annual Report on the results of monitoring the Internal Electricity and Gas markets in 2012’, (2013) pgs. 238 onwards, 249 and 257.

<sup>125</sup> Commission Staff working document, ‘Energy prices and costs report’, SWD(2014) 20 final/2. Pg. 29 and 30.

contrary, they could mean no favourable conditions available in the market, even low rates of switching may indicate a competitive market with similar prices among suppliers<sup>126</sup>.

The latest market reports show that the average switching rates in 2012 for the fully liberalised countries was 8.0%, whereas it was only 6.5% in the Member States where there is household price regulation in the market<sup>127</sup>, these countries with price regulation set low by the government, have the lowest overall saving potential (France, Spain and Portugal can save below 40 euros per year) and competitors there, are unable to significantly reduce the final electricity bill, as a consequence, those countries' consumers have very few incentives for seeking better deals, staying with their incumbent energy supplier<sup>128</sup>.

It is a rather low rate considering the potential benefits, there might be several reasons behind this fact to explain why consumers switching behaviour across Europe has such low numbers. The ACER report did not find any clear pattern relating consumer switching behaviour and savings potential, indicating that there are other different motives, non-price related that prompt consumers to switch or discourage them not to switch. Spain, as mentioned above, despite having one of the lowest potential savings among Europe, recorded in 2012 one of the highest consumer switching rates<sup>129</sup>. There are non-economic related factors that can discourage consumers from switching to another supplier, I will focus on customer behavioural determinants and avoid assessing other legal and contractual terms that can also constitute barriers for switching (like abusive contracts or non-negotiated clauses). We encounter as a subjective determinant, consumer loyalty to suppliers as a deterrent for switching, generally, consumers are committed to their supplier if they are satisfied with their services, therefore not interested in other suppliers, around 38% of European consumers indicated satisfaction with their current provider<sup>130</sup>, this loyalty fact, has also a negative side for competition, it can act as an entry barrier for new market entrants, they face major disadvantages because it is really more difficult to win customers as a new supplier than to keep them in the retail energy market, if competitors equal the offerings of the new incumbent, customer will rarely switch away from their current supplier<sup>131</sup>.

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<sup>126</sup> ACER/CEER 'Annual Report on the results of monitoring the Internal Electricity and Gas markets in 2012', (2013) pg. 25 onwards and 33.

<sup>127</sup> *Ibidem* pg. 34.

<sup>128</sup> Christophe Domacque, 'European Residential Energy Price report' (2013) VaasaETT, pg. 21 and 22.

<sup>129</sup> ACER/CEER Annual Report, *op cit.*, pg. 36.

<sup>130</sup> ECME Consortium, 'The functioning of retail electricity markets for consumers in the European Union' (2010) Final Report, EAHC/FWC/2009 86 01, pg. 93.

<sup>131</sup> CRIEPI (2012) 'Impacts and lessons from the fully liberalized European Electricity market', report Y11018, pg. 31.

The lack of information and transparent comparison capacity may also contribute to the low rates of switching, when consumers do not know that they can choose supplier or do not have enough data about how much they can save, they tend to stay with their default supplier because they are unaware of the benefits available. There is also the possibility that consumers did not switch because there is no existence of an alternative local supplier<sup>132</sup>, the market structure is by itself then, a barrier to switching.

The complexity of tariffs, time-consuming or slow processes for switching (2 months in many countries) can also act as a deterrent for consumers. Transparent and easy information, like making tariffs easily comparable and allowing homogenous price comparisons is needed to promote consumer switching and help reduce the perceived risk; speeding up the process by national initiatives can also promote and facilitate switching<sup>133</sup>.

In conclusion, It is clear that consumer switching behaviour helps reducing the energy bill and promotes competition between electricity suppliers to offer the best tariffs and attract new customers, although the margin for price improvement might be a little narrow in some countries, it is always an improvement. Member States are compelled by the Directives to protect and promote this regime, not exempt from several shortcomings and barriers that hinder the whole process.

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<sup>132</sup> ACER/CEER 'Annual Report on the results of monitoring the Internal Electricity and Gas markets in 2012', (2013) pg. 38.

<sup>133</sup> Ibidem

## **CONCLUSIONS**

The European energy market liberalization has been a long and difficult process, from the very first idea contained in the Treaty of Rome to the latest implementation of the Third Electricity Directive some years ago, more than half a century has elapsed, a considerable amount of time for a process that has deeply transformed Europe and all the Member States involved in it, and that is yet quite far away from completion. Despite all the improvements achieved, liberalization it is not yet a completely successful project, the electricity industry is a very complex conglomerate, where competition, historically, was not an inherent part of it, given that, it was managed by countries through monopolies due to its consideration as a public service and the crucial importance it bore for the welfare and development of society; liberalization has gradually introduced competition in the electricity market with the objective of transforming it into a more efficient system and contribute to increase consumer welfare; despite this fact, it can be observed nowadays, that prices have risen over the years and this trend, most likely, is not going to decrease in the years to come; the price problem is not the only one affecting the system, today, Europe is facing additional problems like: high levels of market concentration in several Member States, increases in energy poverty due to high prices and the economic crisis, loss of competitiveness against other regions, threats to the security of supply, low levels of interconnections and cross country energy trading in peripheral countries and difficulties for establishing a proper Internal market due to important structural barriers existing among Member States. Nevertheless, not everything in the liberalization process can be deemed negative, consumers enjoy several benefits nowadays like: increased protection and monitoring by the NRAs, supplier choice options, vulnerable consumer protection, information transparency, universal service and a progressive decarbonisation and decrease of environmentally harmful emissions.

After all the efforts and capital spent in this endeavour, there is no possible turning back to the previous structures, Europe reached the point of no return many years ago, when Member States abandoned their energy monopolies and modified all the national structures to accommodate the new regime imposed. The only possible direction left nowadays is to continue improving the market and solving all the problems mentioned above that upset the system, for this purpose, a careful and reasonable planning is needed, as well as coordination and cooperation at a Communitarian level.



## **A Brighter Future?**

European institutions and Member States have already drawn the lines of the future of the Electricity industry, with the view set in the year 2050, the European Energy Roadmap 2050 (Brussels COM(2011) 885/2) envisages two periods of time as deadlines to further develop the European energy market, 2020 and 2030, each step with a respective set of goals to achieve, continuing the liberalization process, before reaching the final objectives set for the Electricity industry in 36 years from now. Achieving these goals is not going to be an easy task, it will require large capital investments (the Commission estimates them in Trillions of Euros), Member State's commitments and a lot of developments in the energy field, although these goals remain almost unchanged since the approval of the first Directive (safe, secure, sustainable and affordable energy), new ones have been introduced lately, the European Union is now committed to reducing greenhouse emissions to 80-95% below 1990 levels by 2050 by achieving a low-carbon economy. This shift is going to require a radical change in the mix of electricity production, with an increasing presence of renewable energies in the energy generation and less fossil fuel based power generators (decarbonisation level of power generation systems of 57-65% in 2030 and 96-99% for 2050), that is why Member States have already started investing strongly in alternative energy sources in the previous years. Although it is impossible to accurately foreshadow the future of the energy markets since there are too many factors to be taken into account; the need for change is clear for Europe, being the closest deadline set for the year 2020, this shift implies major changes in technology, networks and prices. EU institutions are aware of the shortcomings that affect the market nowadays and they are pushing to achieve the 2020 objectives: more efficient use of the energy (with 20% savings by 2020), ensuring the free movement of energy, technological shift by further developing current technologies and increasing collaboration with Europe's peers.

As it happened in the years after the liberalization, costs of the energy system will continue increasing, as well as the electricity demand by the time 2050 is reached. Electricity prices will continue raising for consumers, although, Commission's previsions suggest that they will fall after 2030, when most of the electric generation is substituted by renewable and efficient energies, the minimum threshold contemplated by the Commission for renewables gross consumption is at least 55% of the total energy consumption in 2050, with a maximum of 97% (this would include efficient electricity storage mechanisms that, nowadays is impossible).

From my personal point of view, the goal of transforming the European energy market into one more efficient and environmentally friendly is a laudable objective worth pursuing, but high levels of commitment and coordination will be required from the Member States. Nevertheless I believe that there are important pressing matters to attend to before fully undertaking this deep market reform, the problem of high prices should be tackled to stop energy poverty and in the same line, the renewable energies subsidy schemes should be redesigned by finding alternative sources of financing, to avoid charging the growing costs to final consumers, lightening this way, the price of the electricity bill and avoiding future price increases.

In the words of Commissioner for Energy Günther Oettinger: *“Europe’s energy sector is on the threshold of an unprecedented period of change. Secure energy supplies and affordable prices are crucial for our growth, job creation and quality of life. There is no time to waste if we are to ensure a brighter future for our energy market. The global energy system is entering a phase of rapid transition with potentially far-reaching implications that will unfold in the next decades. Europe has to act before the window of opportunity closes. Time is short”.*

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## LEGISLATION

-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.

-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.

-Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity

-Real Decreto-ley 13/2012, transposing Directive 2009/72/CE relating electricity markets.