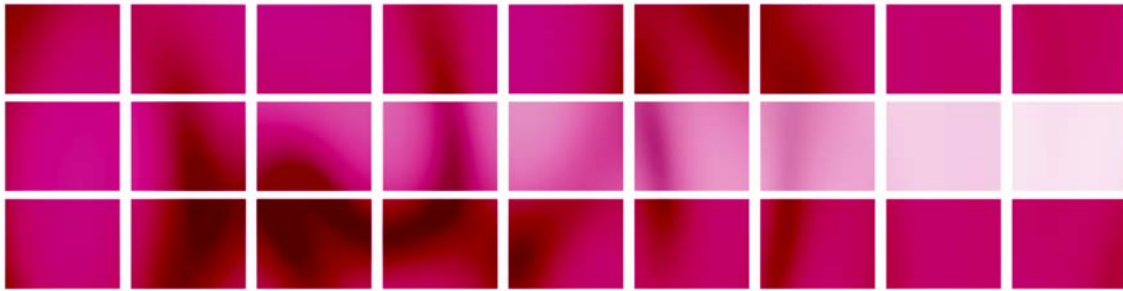


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PRIVATISATION OF PUBLIC SERVICES AND THE IMPACT ON QUALITY, EMPLOYMENT AND PRODUCTIVITY (PIQUE)

Liberalisation, privatisation and regulation in the Belgian electricity sector

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Country report on liberalisation and privatisation processes and forms of regulation

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1. MARKET STRUCTURE

1.1. Introduction to the electricity market

The electricity sector consists of three segments. The first segment is that of generation. This is the production of electricity. The second segment is that of network operations. These network operations are in turn separated into transmission and distribution. The transmission networks, on the one hand, are networks with a voltage higher than 70kV. The distribution and local transmission networks on the other hand have a maximum voltage of 70kV. The last segment is that of supply, which also entails supply and retail activities (Gusbin e.a., 2003, p. 51). For reasons of clearness/simplicity only the terms generation, transmission, distribution and supply will be used in the rest of the text.

1.2. Market structure before liberalisation (question 1.1)

Before the liberalisation of the sector began, the **generation** segment was dominated by Electrabel. The company had a market share of 91 % in this segment. SPE, a producer in public hands, was also active in this segment and had a market share of 6.5 %. The rest of the market share was divided over a number of small autonomous producers and industrial auto-producers. Moreover, Electrabel and SPE created CPTE in 1995 to coordinate and manage their activities in both the segment of generation and transmission (Huveneers, 2005, p. 19). Thus, Electrabel had a de facto monopoly in the generation of electricity.

The segment of **transmission** was dominated by CPTE, which had a monopoly (Huveneers, 2005, p. 17). The **distribution** networks, on the other hand, were the propriety of the municipalities. They had a legal monopoly for the distribution of electricity (IEA, 1997, p. 24 & 80). In some cases, the distribution was taken care of by a single municipality by setting up a municipal company (Huveneers, 2005, p. 19; IEA, 1997, p. 80). Most municipalities, however, transferred the distribution of energy to inter-municipal companies set up by groups of municipalities (the 'intercommunales') (IEA, 1997, p. 24). There were two types of 'intercommunales': pure 'intercommunales' (this means pure public ownership), and mixed 'intercommunales', in which municipalities joined forces with a private company to organise distribution management and investment activities. The private company working in association with the municipalities was Electrabel, which participated for approximately 60 %. At the end of 1995, Electrabel was the private partner of 33 mixed inter-municipal companies, serving 512 out of a total of 589 municipalities (IEA, 1997, p. 80). The inter-municipal companies were tied by agreements to purchase electricity from Electrabel for a period of 15 years. This meant that Electrabel also had a dominant position in the distribution segment (IEA, 1997, p. 87).

Finally, the **supply** of electricity was also in hands of municipal and inter-municipal companies. Electrabel and SPE, however, were responsible for the supply to clients directly connected to the transmission network (Huveneers, 2005, p. 19). In 1999, the shares of these four types of suppliers in total market supply were: municipal utilities, 1%; inter-municipal companies, 12%; mixed inter-municipal companies, 49%; and Electrabel and SPE, 38% (IEA, 2001, p. 65).

Table 1: Market structure

	Before the process of liberalisation	After the process of liberalisation
Generation	Domination of Electrabel (91% market share) SPE (6,5% market share) Autonomous producers and industrial autoproducers (the rest) Electrabel + SPE created CPTe for coordination	Electrabel + SPE (98%) RWE EDF
Transmission	CPTe	Elia (94% of the network) 4 pure inter-municipal companies (6%)
Distribution	Municipal companies Pure inter-municipal companies Mixed inter-municipal companies (+ Electrabel)	Municipal companies Pure inter-municipal companies Mixed inter-municipal companies (+ Electrabel) Elia BIAC
Supply/sales	Municipal companies (1%) Pure inter-municipal companies (12%) Mixed inter-municipal companies (+ Electrabel) (49%) Electrabel + SPE (38%)	Electrabel Customers Solutions + Electrabel (supply 85,8% of all demanded electricity) Luminus Etc.

This was how the market looked like before the process of liberalisation began. It is clear that there was a strong dominance of Electrabel in all segments of the sector before liberalisation.

1.3. Steps and processes of liberalisation

The start sign for the liberalisation process was given in 1999 with the transposition of the European directive at the federal level. In 2001, the law of 1999 was further completed and amended. The regions, in turn, completed the transposition of the directives in 2000 and 2001 (Huveneers, 2005, p. 21). The opening of the market in the segment of supply has been completed in 2003 in the Flemish region. The market is not yet fully opened in the distribution segment, since the distribution companies are still not entirely free to choose producers. The market opening in the Walloon and Brussels region will not be completed before 2007 (Huveneers, 2005, p. 32). **(question 1.2.i)**

The European Union was a very important driver in this process, since Belgium did not take any initiatives with regard to the liberalisation of the sector until Europe issued a directive in 1996. Belgium did go further though than it was obliged to do. It did so by

asking a legal unbundling¹ instead of the separation of accounts asked by the European Union directive of 1996 (Deconinck e.a., 2004, p. 4). As we will see further on, the fact that Belgium decided to go faster than asked by the European Union did not mean that the process of liberalisation was any easier than in the other countries. The actual results are not that impressive (**question 1.2.ii**)

The Belgian federal level finished the transposition of the 1996 directive by 1999 with the Electricity Act (Gusbin e.a., 2003, p. 54). This framework law defines the basic elements for the transposition of the EU directive covering the areas of federal competence, including generation, transmission, pricing, long-term planning and competition issues (but not renewable energy systems and combined heat and power). To fully comply with the EU directive, the federal framework law and related executive decisions taken at federal level were complemented by regional decrees to cover the areas of regional competence (IEA, 2001, p. 70). The regional legislative and administrative provisions deal essentially with the distribution of electricity, the rational use of energy and renewable energy (Gusbin e.a., 2003, p. 54).

The law of April 1999 aimed at a progressive opening of the market. The Electricity Act stipulated that electricity generators from now on need to have a license before they can start their activities (Deconinck e.a., 2004, p. 10). Furthermore, the transmission and distribution of electricity become a legal monopoly and must be legally separated and independent from generation and supply (Gusbin e.a., 2003, p. 51). The main result of legal unbundling was the establishment by CPTE to achieve the objective of legal unbundling, CPTE first of all created the subsidiary Elia for its network activities. Elia has been created in June 2001. One year later, Elia System Operator has been chosen by the government as the Transmission System Operator (Huveneers, 2005, p. 31). Secondly, the municipal and inter-municipal companies had to stop their supply activities in order to fulfil the obligations of the Electricity Act (Huveneers, 2005, p. 31). Finally, with regard to supply, the Electricity Act states that the final consumers, who consume more than 100 GWh, and who constitute 33% of the Belgian electricity market, should be eligible to choose their suppliers as from 24 October 2000. All other consumers should be free to choose their supplier as of 1 January 2007 (IEA, 2001, p. 70).

The new government elected in July 1999 decided to speed up the liberalisation process. The new schedule was introduced by the Royal Decree of 11 October 2000. It stated that final consumers with electricity consumption of 20 GWh or more per site would be eligible from 31 December 2000 (i.e. about 45% of the market) and final consumers with electricity consumption of 10 GWh or more per site from 31 December 2002 on (IEA, 2001, p. 70). Finally, all consumers would be free to choose their supplier as from July 2004 (De Meulemeester e.a., 2006, p. 62).

¹ Legal unbundling by placing the network operations in a separate entity goes further than the separation of accounts. However, it is not yet a situation in which there is full legal and economic dependence of the network manager (Gusbin e.a., 2003, p. 24-25 & WP1-guidelines, p. 9).

Flanders also revised its legislation, and the decree on the organisation of the electricity market was approved in July 2000. In January 2001, the Flemish government published a new draft schedule that stipulated that full market opening for customers was to take place on 1 July 2003 (IEA, 2001, p. 71). The other regions have a different time schedule.²

Transposing the European directives alone was not enough. Concrete measures had to be taken if the liberalisation of the electricity market was to become reality. One of the measures taken in this process was the dissociation of CPTE,³ so that there would be more competition in the segment of generation (Deconinck e.a., 2004, p. 11). To intensify competition in this segment even further it was decided that parts of the generation capacity of Electrabel had to be auctioned (Public Auctions of Virtual Power Plant) (Huveneers, 2005, p. 31). Later on, Electrabel appointed Belpex as the actor responsible for the operation of the Virtual Power Plant (Electrabel, 2006, p. 2). (question 1.2.iv)

Important with regard to the pace and direction of the liberalisation process was the fact that a new government was formed in 1999 at the federal level. The previous coalition of christen-democrats and the socialist party was replaced by a tripartite coalition consisting of the liberal party, the green party and the socialist party. Both the liberal and green party supported, each for its own reasons though, the liberalisation of the sector (Agalev, 1999, p. 96-97 & VLD, 1999, p. 3). This can explain why a new Royal Decree was issued to speed up the whole process. Furthermore, the pace can also be partly explained by the anticipative behaviour showed by the federal regulators toward the new European directive (CEEG, 1998, p. 19). (question 1.2.v)

1.4. *Current market structure and remaining challenges*

The objective of the liberalisation process was to alter the structure and concentration of the market. However, the changes were rather limited (see Table 1). First of all, in the **generation** segment only two new companies did enter the market (Huveneers, 2005, p. 26), but that did not affect the dominant position of Electrabel in generation. Electrabel and SPE together still produce 98% of the electricity in Belgium (De Meulemeester e.a., 2006, p. 66). This means that the concentration in this part of the market is still very high, partly because Electrabel has not yet sold part of its generation capacity. Secondly, the **transmission** segment is still dominated by one company. However, as a result of the obligated legal unbundling of generation and transmission, the company managing

² There will not be a full opening of the market in Brussels and the Walloon region until July 2007 (De Meulemeester e.a., 2006, p. 16). However, by 2005, 91% of the global Belgian demand for electricity could be delivered by a supplier of choice. Only the domestic customers with a small electricity consumption in Brussels and the Walloon region can not yet freely choose their supplier (CREG, 2006, p. 8).

³ Electrabel and SPE were no longer allowed to coordinate their activities in the segment of generation. Therefore, CPTE was dissolved. Since then both Electrabel and SPE own the shares of Elia that were previously in hands of CPTE (Deconinck, 2004, p. 11).

the network is no longer CPTE, but Elia (Huveneers, 2005, p. 31). Then there is the **distribution** segment, which has more or less remained the same. The municipalities still have a dominant position (Spinnewyn, 2006, p. 53). They have a legal monopoly (Gusbin e.a., 2003, p. 51). Only two new companies, Elia and BIAC, entered this segment (Huveneers, 2005, p. 31). In July 2004, there were 27 distribution grid operators. Finally, there is the **supply** segment where some changes did occur. The changes at first sight seem very impressive with more than 40 companies now active in this segment (Huveneers, 2005, p. 32). However, the impact of these companies is rather small. Here again it is Electrabel that has a dominant position, since only 14, 2 of the total amount of demanded electricity is supplied by competitors (CREG, 2006, p. 9). A more significant change is the fact that the municipalities are no longer active in this segment. Since the new Belgian electricity law stipulates a separation of distribution and supply activities, the municipalities were obligated to cease their activities in supply. The eligible customers who were previously operated by the mixed inter-municipal companies and who did not select a new supplier were from then on supplied by Electrabel Customers Solutions⁴ (ECS) (Huveneers, 2005, p. 31 & Deconinck e.a., 2004, p. 6). The pure inter-municipal companies transferred their retail activities to a new commercial entity called Luminus (Huveneers, 2005, p. 32). **(question 1.3)**

During the process some difficulties occurred and even now a couple of challenges are yet to be taken care off. Only a couple of those problems and challenges will be discussed here. First of all, companies were reluctant to provide data in a more competitive business environment. The government has then addressed this problem in new legislation, but there is still room for improvement. While Belgium is not unique in this regard, more rapid data processing and availability would improve monitoring and competitive conditions in the energy sector (IEA, 2001, p. 32). Secondly, there was a problem with the coordination between the regions. It was important that the regions did not set different schedules and conditions for market liberalisation, since this could distort competition at the national level (IEA, 2001, p. 31). Consistency of measures taken by the regions was and still is an important challenge. Thirdly, there is the dominance of Electrabel in the whole sector and the vertical integration, with Electrabel still being a shareholder of Elia. This dominance of Electrabel distorts competition and makes it hard for new companies to enter the market, since they would have to compete with Electrabel. Finally, there also some remaining challenges concerning the consumers. First of all, there has been a problem with the contracts offered by the suppliers. Not all the necessary information was included in the contracts, which was very misleading (Test-Aankoop, 2004). These problems should, however, now be solved (Petitjean, 24.06.2006) Even more problematic is the attitude of the domestic consumers in the Flemish region. According to a survey of the federal regulator 'Commission for the Regulation of Electricity and Gas', only 24 % of the domestic customers has actually chosen a new supplier since they have the possibility to do so.

⁴ ECS is an affiliate company of Electrabel. ECS was only given permission by the Belgian authorities to become the supplier of those consumers after it agreed to fulfil a number of obligations, such as a clear separation between the supply activities and the network activities (Huveneers, 2005, p. 31).

37% is still customer of the supplier to which they were assigned to after the opening of the market (mainly Electrabel Customers Solution). The rest signed a contract with the standard supplier (VREG, 2006, p. 8). The market will, however, not function properly as long as customers do not use the rights they have been given to select their own supplier based on the prices and services they offer. (**question 1.4**)

2. *REGULATION*

2.1. *Instruments*

Regulation before the process of liberalisation was rather limited. In the **generation** segment, the producers had to come up with an investment plan to ensure the generation capacity (Huveneers, 2005, p. 18). Tariff regulation by the Control Committee for Electricity and Gas was used in the **transmission** and **distribution segments** (CCEG, 1998, p. 19). Furthermore, the distribution networks were the property of the municipalities (IEA, 1997, p. 24 & 80). This means that public ownership was also used in the distribution segment as a regulatory instrument to control the inherent tendency for natural monopolies in network operations. The **supply** segment was subjected to price regulation based on the rate of return principle. The regulatory procedure involved the submission of financial results to the Control Committee for Electricity and Gas, which assessed costs and set prices according to a formula that covered all major costs. The formula was valid until there was a significant change in the generating facilities (IEA, 1997, p. 83). The actors active in the supply segment were also subjected to social regulation, such as the obligation not to interrupt the delivery of electricity in the winter (CCEG, 1998, p. 20). Finally, the whole sector was also subjected to environmental regulation (IEA, 1997, p. 47-48). (**question 2.1**)

Table 2: Instruments of regulation

	Before the process of liberalisation	During the process of liberalisation	After the process of liberalisation
Generation	Investment plan Environmental regulation	Belpex	Licenses for generation-installations PSO's (technical, environmental and social)
Transmission	Tariff regulation Environmental regulation	Legal unbundling	License for the TSO Corporate governance regulation Development plan for the transmission grid Regulated third party access (national transit) Negotiated third party access (international transit) Access tariffs Market balancing system PSO's (technical, environmental and social)
Distribution	Legal monopoly of the municipalities Environmental regulation	Legal unbundling	Licenses for distribution network operators Regulated third party access (national transit) Negotiated third party access (international transit) Access tariffs Market balancing system PSO's (technical, environmental and social)
Supply/sales	Price regulation Social regulation Environmental regulation	Definition of the reserved market	Licenses PSO's (technical, environmental and social) Maximum prices

Once the process of liberalisation began, a number of new regulatory measures were implemented to reach the objective of an open market (see Table 2). The first instrument was the legal unbundling of network operations from generation and supply activities to allow for more competition in the electricity market (cfr. supra). Moreover, Electrabel and SPE were no longer allowed to coordinate their activities in the segment of generation. Therefore, CPTÉ was dissolved (Deconinck, 2004, p. 11). A third instrument used during the transition phase was the definition of the reserved market.⁵ This way, the opening of the market was gradually achieved (cfr. supra). Recently, a new instrument has been established to stimulate the opening of the generation segment: the electricity exchange stock Belpex. Belpex was given a license by the federal regulator 'Commission for the Regulation of Electricity and Gas' to organise the electricity exchange stock. It was established by Elia, APX, POWERNET and Tenets (CREG, 2006, p. 11). As already mentioned, it will sell a part of the production capacity of Electrabel (VVP: Virtual Power Plant). Belpex will not, however, organise any auctions before mid-2008, which explains the dominance of Electrabel in generation (De Meulemeester e.a., 2006, p. 77-78). (**question 2.2**)

⁵ This refers to the fact that from the beginning it was well defined when certain groups of customers were to become free to choose their own supplier. In other words, the law defines the parts of the market that were reserved for the incumbent companies and the parts where competitors were allowed (cfr. supra).

However, as already mentioned, the concentration in the generation and supply segments is nowadays (after liberalisation) still very high. Therefore, additional regulation for competition is needed. Moreover, the existence of a monopoly in both the transmission and distribution segment also necessitates the use of other regulatory instruments in Belgium. In other words, the Belgian market is not yet ready to fully rely on competition law since the process of liberalisation is not quite finished.

One of the instruments now used in the **generation** segment is that of public service obligations. The Minister of Energy also gives out licenses for generation installations for electricity after advice from the federal regulator 'Commission for the Regulation of Electricity and Gas' (CREG, 2006, p. 13 & p. 16). The licenses are not granted on a competitive basis. Companies applying for a license simply have to hand in a dossier in which they prove that they fulfil the necessary conditions (Deconinck, 2004, p. 9).

Other instruments are used in the **transmission** segment. For instance, the Minister grants a license to the Transmission System Operator (Huveneers, 2005, p. 32). Normally the mechanism of competitive tendering should be used for granting this license, since there can only be one Transmission System Operator. However, in reality, Elia was the only candidate for the function (Deconinck, 2004, p. 13). The Transmission System Operator has to draw up a development plan for the transmission grid that has to be submitted to the federal regulator 'Commission for the Regulation of Electricity and Gas' for advice. This plan then has to be approved by the Minister of Energy (CREG, 2006, p. 20). Furthermore, the TSO is subjected to corporate governance regulation (Huveneers, 2005, p. 27). The Transmission System Operator is also obligated to implement a balancing mechanism⁶ (Gusbin e.a., 2003, p. 61). Finally, the Transmission System Operator is subjected to public service obligations.

With regard to the issue of access to the network, Belgium opted for regulated third party access (TPA) for domestic operations and negotiated TPA for international entries⁷ once the process of liberalisation began. The federal regulator 'Commission for the Regulation of Electricity and Gas' has to approve the access tariffs that were proposed by the Transmission System Operator (CREG, 2006, p. 27).

Some of these same instruments are also used to regulate the **distribution** segment. First of all, the Flemish regulator 'Vlaamse Reguleringsinstantie voor de Electriciteits- en Gasmarkt' gives out licenses for twelve years to the distribution network operators (De Meulemeester e.a., 2006, p. 83). Here again, this happens on a competitive basis, since the distribution network operators have a legal monopoly. Each distribution network operator has to fulfil certain conditions (Deconinck, 2004, p. 29). Regulation

⁶ The balancing mechanism implies that responsible parties may ask the TSO to compensate for the imbalance between their injections to and takings from the network against payment (Gusbin e.a., 2003, p. 61).

⁷ Regulated third party access means that access to the network is granted to companies based on previously published and approved tariffs and conditions. In the case of negotiated third party access the tariffs and other commercial conditions for access are determined case by case after negotiations between the network operator and the company (Deconinck, 2004, p. 14).

for balancing the market is also in place (Huveneers, 2005, p. 23-24). There are also public service obligations in this segment.

As in the transmission segment, regulated third party access and negotiated third party access are used to regulate access to the distribution network (Huveneers, 2005, p. 27). The current federal regulator ‘Commission for the Regulation of Electricity and Gas’ has to approve the tariffs proposed by the distribution network operators (CREG, 2006, p. 25).

Finally, the segment of **supply** is also subjected to regulation. First of all, the Ministry of Economic Affairs fixes maximum prices for electricity sold to customers (CREG, 2006, p. 10). Secondly, companies can only supply electricity if they have a license granted by the Flemish regulator ‘Vlaamse Reguleringsinstantie voor de Electriciteits- en Gasmarkt’⁸ (De Meulemeester e.a., 2006, p. 87-88). In this case, like in the segment of generation, the granting of licenses is not based on a competitive mechanism. Each candidate has to hand in a file in which they show the Flemish regulator that they meet certain criteria (Deconinck, 2004, p. 30). Finally, like all the other segments, this segment is subjected to public service obligations.

The public service obligations foreseen in the laws are of technical, social and environmental nature. The first two categories relate to the guarantee of a universal and secure service to the consumers. They cope with the right for each household to be connected to the electricity network (a universal service obligation) and with safety, security, regularity and quality of supplies at an affordable price, including the protection of vulnerable consumers. On these issues, legal provisions impose the supply of a minimum level of electricity to households, even when they cannot pay their bill, the installation of pre-payment meters and the application of the social tariff to people with low levels of income (Gusbin e.a., 2003, p. 58). The third category of public service obligations involves the protection of the environment through the promotion of renewable energy sources and the rational use of energy (Gusbin e.a., 2003, p. 58).
(question 2.3)

2.2. *Actors*

In this part, the different actors (see Table 3) involved in the regulation of the market will be described. In the first part the actors of the federal level will be discussed. This

⁸ There is one exception. If a company wants to supply electricity through an intermediary to customers established in Belgium then it needs a license from the federal Minister. Those applying for such a license have to hand in a dossier to the federal regulator ‘Commission for the Regulation of Electricity and Gas’, which then makes suggestions to the Minister who is responsible. It is the Minister who takes the final decision (De Meulemeester e.a., 2006, p. 84). The companies that want to supply directly to the customers need a license from the regional regulator. The license is for an indefinite period and can be withdrawn if the necessary conditions are no longer fulfilled. The obligations that have to be met to get a license are: a number of public service obligations, the obligation to respect the technical regulations and the obligation to report (De Meulemeester e.a., 2006, p. 84 & p. 87).

first part in turn consists of two parts: a first part on the situation before liberalisation and a second part on the current situation. In the next part the actors of the regional level will be described. Here again a division will be made between the situation before liberalisation and the current situation. The federal level on the one hand is responsible for the generation and transmission segments and for determining the tariffs. The regions, on the other hand, are responsible for distribution and supply (CREG, 2001, p. 7).

Table 3: Regulating actors

	Before the process of liberalisation	After the process of liberalisation
Federal level	Minister and Department Control Committee for Electricity and Gas	Commission for the Regulation of Electricity and Gas General competition authority 'Raad voor de Mededinging'
Regional level: Flanders	Minister of Energy Department of Environment, Nature and Energy	Vlaamse reguleringsinstantie voor de elektriciteits - en gasmarkt CWAPE

Different actors at the federal level were involved in the regulation of the electricity sector before the process of liberalisation took place. First of all, it was the responsible Minister and its department at the federal level that played an important role. Secondly, government was also involved in a continuous dialogue with the market players in the framework of the Control Committee for Electricity and Gas (CCEG) (IEA, 2001, p. 74). The Control Committee for Electricity and Gas was an autonomous public body that monitored the electricity and gas sectors, and regulated the electricity and gas market. It was composed of representatives of the gas and electricity industries, trade unions and national and regional authorities, and it operated by consensus. The recommendations of the Control Committee for Electricity and Gas to producers and distributors of electricity and gas were not binding, but in fact they were always accepted since all of the committee's members had reached a consensus to implement them (IEA, 2001, p. 21). The Control Committee was also responsible for recommending electricity tariffs to the Government (IEA, 1997, p. 82) and for the enforcement of regulation. It shared the enforcement task with the National Energy Committee (IEA, 1997, p. 82).

Already during the process of liberalisation some changes occurred at the federal level with regard to the actors involved in the regulation of the sector. In 1999, the federal regulator 'Commission for the regulation of Electricity and Gas' (CREG) was created (IEA, 2001, p. 21). The federal regulator has both an advisory, monitoring and controlling role (Gusbin e.a., 2003, p. 54) However, despite its advisory legal role, the newly established federal regulator has some real powers such as accepting transmission tariffs and authorising the refusal of access to the network (IEA, 2001, p. 21). Furthermore, it established an indicative plan of power generation means for the next ten years, it controlled the application of laws and regulations and it was also the dispute settlement authority (Gusbin e.a., 2003, p. 54).

So, this meant that during the transition phase there were two federal regulators in this sector. The responsibilities of the new federal regulator for liberalised markets (Commission for the Regulation of Electricity and Gas) and the regulator for captive markets (Control Committee for Electricity and Gas) were, however, well defined and not overlapping (IEA, 2001, p. 31-32). In 2003, the Control Committee for Electricity and Gas was finally abolished. Since then the federal regulator 'Commission for the Regulation of Electricity and Gas' has been the only sectoral regulator at federal level (Deconinck, 2004, p. 21).

The federal regulator is composed of six members, appointed for a renewable period of six years by the Council of Ministers. The commission is assisted by a General Advisory Council composed of federal and regional government representatives and representatives of the industry's social and economic interests. Its operational costs are financed by a charge on transmission tariffs (IEA, 2001, p. 74). The members of the Board of Directors are not allowed to have any direct or indirect interest in the electricity industry (Gusbin e.a., 2003, p. 54).

Regulation was not only the responsibility of the Federal level. The regional level was (and still is) also involved. Like at the federal level it was the responsible Minister and its department at the regional level that played an important role before liberalisation. In the case of the Flemish region, it was the Minister of Energy and the Department of Environment, Nature and Energy that had a regulatory role to play (De Meulemeester e.a., 2006, p. 58).

In 2001, once the liberalisation of the market was started, the Flemish regulator 'Vlaamse Reguleringsinstantie voor de Electriciteits- en Gasmarkt' (VREG) was established as an independent agency (Deconinck, 2004, p. 28). Its tasks are to appoint the distribution network operators, to grant delivery licences to suppliers and to issue guarantees of origin to producers of electricity from renewable energy sources and combined heat and power systems. Furthermore, the Flemish regulator draws up technical regulations for access to the electricity network and for the management and expansion thereof. It also mediates and deals with disputes relating to access to the distribution network, and the application of the code of good practice and technical regulations. Moreover, the Flemish regulator has also a control function. It carries out careful monitoring to ensure that the distribution network operators and suppliers comply with legal and statutory obligations (www.vreg.be). Finally, it is also the responsibility of the regional regulators and the federal regulator to enforce regulation. One of the instruments they can use is that of administrative fines (Deconinck, 2004, p. 36). The Flemish regulator can also withdraw the licenses for supply it has issued when the companies no longer fulfil the necessary conditions (De Meulemeester e.a., 2006, p. 131). The regulator for the Walloon region is CWAPE. The Brussels region has not yet nominated a regulator.

Belgium does not only have sectoral regulators. There is also the general competition authority 'Raad voor de Mededinging' that has been established in 2000 by the Federal Public Service Economy, SMEs, Self-employed and Energy (<http://mineco.fgov.be/>

organization_market/competition/competition_council/competition_nl_004.htm).
(question 2.4 & 2.5)

2.3. *Problems*

The regulation of the electricity sector is not completely free of problems. A first problem is related to the fact that there is a federal and a regional regulator, each with its own responsibilities. Although there has been consultation between the different regulators, the IEA report of 2006 still states that co-operation and co-ordination is a problem and that it should be strengthened (IEA, 2006, p. 12). The question also remains if the federal regulator 'Commission for the Regulation of Electricity and Gas' has enough regulatory power and resources to discharge its increasing responsibilities. A second problem is related to the unbundling measure used during the transition phase. Many of the electricity distribution companies also distribute natural gas and provide cable television services. Unbundling these different functions is required, but so far no instructions have been given by the governments on practical implementation (IEA, 2001, p. 75). Even more problematic is the fact that Electrabel still has a participation of 27.45% in Elia, the transmission system operator and a share of 30% in the mixed inter-municipal companies (cfr. infra). (question 2.6)

2.4. *Conclusion*

The list of regulatory instruments used in the Belgian electricity market is still quite large. This means that fair competition between the different actors is not yet possible without the use of regulatory instruments, other than the enforcement than general competition law. When looking closer at what instruments are exactly used to regulate, then it becomes clear that a lot of these instruments are instruments typically used to regulate network industries. Examples are regulation to deal with the access to the infrastructure and public service obligations. Quite a lot of these instruments can be classified as structure regulation. The two clearest examples are the unbundling of the network and regulation of the access to the market by granting licences and by determining the access tariffs. However, conduct regulation is also used, since the possibility to set maximum prices exists.

3. ACTORS/OWNERSHIP

In this section we will discuss the most important actors (see Table 4) of the electricity industry. For each actor, a short description of the company before and after the process of liberalisation will be given with respect to its ownership structure, main activities and were possible other details like staff number.

Table 4: Actors

	Before the process of liberalisation	After the process of liberalisation
Generation	Electrabel <ul style="list-style-type: none"> - Majority of shares held by Tractebel and small minority by municipalities - for profit company predominantly in private hands - generation, transmission, distribution and supply SPE <ul style="list-style-type: none"> - company in public hands - generation, transmission and supply CPTE	Electrabel <ul style="list-style-type: none"> - 99% of shares held by Suez - private for profit - generation and supply SPE <ul style="list-style-type: none"> - company in public hands - generation and supply - shareholders: Centrica, Gaz de France, Publilum and the historical shareholders of SPE EDF <ul style="list-style-type: none"> - generation and supply
Transmission	CPTE <ul style="list-style-type: none"> - partly public/partly private - transmission 	Elia <ul style="list-style-type: none"> - subsidiary of CPTE - Transmission System Operator - shares: public-T (30%), Electrabel (27,45%), SPE (6%) and the rest was introduced on the stock market - partly public/partly private - transmission
Distribution	Municipal companies Inter-municipal companies <ul style="list-style-type: none"> - pure public companies and mixed companies partly public/partly private - distribution and supply - Electrabel participates for approx. 60% in the mixed inter-municipal companies - obligation to buy electricity from Electrabel 	Municipal companies Inter-municipal companies <ul style="list-style-type: none"> - pure public companies and mixed companies partly public/partly private - distribution - distribution network operators - Electrabel participates for approx. 30% in the mixed inter-municipal companies - obligation to buy electricity from Electrabel
Supply/sales	Electrabel SPE Municipal companies Inter-municipal companies (pure and mixed)	EDF, Electrabel, SPE, RWE Kay Account GmbH, Essent Belgium N.V., E.ON sales and trading GmbH, trading GmbH, Nuon, RWE Solutions AG, SPE, Eneco Energie Internationaal BV, Essent Energie Trading BV, City Power, EBEM, ECS, Ecopower, Lampiris NV, Luminus, Wase Wind, Anode, Energo, Trianel Energie, E.ON Belgium

A first very important company in the Belgian electricity market is Electrabel. Electrabel was and still is a for profit organisation mostly in private hands (Huveneers, 2005, p. 17). Its shares before liberalisation were held by Tractebel and by the municipalities (IEA, 1997, p. 26 & p. 82). Electrabel was not only active in generation, but also in the segments of transmission, distribution and supply. Just over 15 000 people worked for the company (Electrabel, 1998, p. 75).

The situation of Electrabel after liberalisation is quite different. Electrabel is still the most important company active on the market. Its shareholding structure has, however, changed significantly. The municipalities are still shareholder of Electrabel. The total share of the municipalities, however, dropped from 5, 01% in 1997 to 4, 57 in 2004. The mixed inter-municipal companies then sold a part (4, 39%) of their Electrabel shares to Suez (Spinnewyn, 2006, p. 24). Since December 2005, the international industrial and services group Suez owns almost 99% of Electrabel (CREG, 2006, p. 13). Electrabel also reorganised its activities around four core activities: electricity generation; building, management and maintenance of electricity and natural gas networks; electricity and natural gas trading; supply of electricity, natural gas and derived energy products and services (<http://www.electrabel.be>). Its activities concerning network operations were, however, transferred to the affiliate company Net Management Flanders (Deconinck, 2004, p. 8). There are now 15 794 people working for Electrabel. The restructuring of the company to anticipate the opening of the market did cause a social conflict (see *infra*).

The only other company active in generation before liberalisation was SPE, a company in public hands. Its shares were held by regional holdings, financial government institutions and municipalities (CREG, 2001, p. 16). Next to generation, SPE was also active in transmission and supply.

The shareholding structure of SPE changed after liberalisation. Its shares are now held not only by the historical shareholders of SPE, but also by the British concern Centrica, the French Gaz de France and Publilum, a 100% subsidiary of the pure inter-municipal companies (<http://www.spe.be>). So SPE was partly privatised, since a big part of the SPE shares are no longer held by Belgian public companies. SPE is nowadays still active in supply, but no longer in transmission. Furthermore, SPE also participates in the suppliers Luminus and Citypower. It now employs 479 people (www.spe.be).

The transmission segment before liberalisation was dominated by CPTE, a company created by Electrabel and SPE. It was a partly in public and partly in private hands. The very existence of CPTE implies that there was more collaboration than competition in the electricity sector before liberalisation (IEA, 1997, p. 86). It is responsible for the construction and management of the main grid system and for international exchanges (IEA, 1997, p 86 & IEA, 2001, p. 64).

The company active in the transmission segment after liberalisation is no longer CPTE, but Elia, a subsidiary of CPTE which later on was dissociated. Elia was created in June 2001 to handle the network operations of CPTE. 30% of the shares were sold to Publi-T (a holding of Belgian municipalities). The other 70% were in hands of the producers

(64% for Electrabel, 6% for SPE). A part (40%) of the stocks of the producers was introduced on the stock market in 2005. Since then the stocks of Electrabel are worth 27, 45% of the share capital and the stocks of SPE 2, 55% (CREG, 2006, p. 18). This means that Elia is partly in public and partly in private hands.

Elia is active in the transmission and distribution segment. Since 2002, Elia System Operator has been nominated by the government as independent Transmission System Operator (Gusbin e.a., 2003, p. 51). It has a license for twenty years (Elia, 2006, p. 1). Its core activities as a transmission operator are maintaining and developing grid infrastructure and connecting electrical installations to the grid. As a system operator, Elia had to provide smooth, objective and transparent access to the grid, supplying all services to enable the transmission of electricity, monitoring electricity flows on the grid to ensure effective operation and constantly managing the balance between electricity consumption and generation. And finally as a market facilitator it has to take initiatives to improve the operation of the electricity market (<http://www.elia.be>).

It is clear that the decision-making structure of Elia has to guarantee some independency from the major market parties. Therefore it is stipulated that Elia has to have six independent directors nominated by the general assembly of shareholders of Elia after unanimous advice of the federal regulator 'Commission for the Regulation of Electricity and Gas' (CREG, 2006, p. 18). However Electrabel, according to the rules of Corporate Governance, can still nominate 3 of the 12 directors (Huveneers, 2005, p. 31).

Other important actors in the electricity market before the process of liberalisation were the municipal and inter-municipal companies. The municipal companies and the pure inter-municipal companies on the one hand were public companies. The mixed inter-municipal companies, on the other hand, were a mix of private and public ownership (Huveneers, 2005, p. 17). Electrabel participated for approximately 60% in the mixed inter-municipal companies. These companies had also an obligation to buy electricity from Electrabel (IEA, 1997, p. 80 & IEA, 2001, p. 65). The municipal and inter-municipal companies were active in both distribution and supply.

The ownership structure of the municipal companies and pure inter-municipal companies still is completely public, whereas the ownership structure of the mixed inter-municipal companies after liberalisation is still partly public and partly private. Electrabel's relation with these mixed inter-municipal distribution companies will however change in the near future. As of 2007, all distribution companies will be free to buy electricity from the supplier of their choice without limitation. There will no longer be any restrictions. (IEA, 2001, p. 65-66). Moreover, the share of the private shareholders in mixed inter-municipal companies in the Flemish region is now limited to 30% and has to be abolished by 2018 (Huveneers, 2005, p. 31). In the mean time, it is stated by law that the municipalities should have the majority of the votes and the presidency of the board and audit organ of the company (Spinnewyn, 2006, p. 39).

The activities of the municipal and inter-municipal companies have changed because of liberalisation. These companies are no longer active in the supply segment. They are now only active in the segment of distribution. They were appointed by the Flemish

regulator ‘Vlaamse Reguleringsinstantie voor de Electriciteits- en Gasmarkt’ as distribution network operators (De Meulemeester e.a., 2006, p. 82). Its tasks are to take care of new connections and to adapt existing connections, to install electricity meters, to make the network available for suppliers, to make sure that the network works efficiently and safe, and finally to fulfil some public service obligations (De Meulemeester e.a., 2006, p. 83). The majority of the mixed inter-municipal companies have organised themselves into EANDIS. It is responsible for the exploitation of the distribution network (De Meulemeester e.a., 2006, p. 83).

Finally, quite a few new companies entered the supply segment. Some of these companies have a license to supply electricity to private persons and to the self-employed, whereas other companies have a license to supply medium-sized and large companies. Still other companies have a license to supply the government (De Meulemeester e.a., 2006, p. 88). One of these suppliers is Luminus. It is the second largest supplier in Flanders (De Meulemeester e.a., 2006, p. 89). It is a company in public hands created by the pure inter-municipal companies (Huveneers, 2005, p. 32). **(questions 3.1 & 3.2)**

It has become clear that few changes occurred with regard to the ownership structure of the different companies active in the sector. The most important changes are the changes of the shareholding structure of some of the companies. Most impressive is the rise of foreign companies on the Belgian market. A clear example is Suez, which now owns 99% of Electrabel.

One of the companies where a change of ownership structure did occur was SPE. As already mentioned, SPE was partly privatised. SPE shares were sold to Gaz de France and Centrica, so there was a share issue privatisation. Together they own 51% of the shares (VVSG, 2006, p. 1). This means that a big part of the SPE shares are no longer held by Belgian public companies. The distribution grid operators, on the other hand, remained in public hands in case of the municipal and pure inter-municipal companies. In case of the mixed inter-municipal companies the ownership structure is still a mix of public and private ownership. However, the plan is to eliminate the participation of private companies completely by 2018. So, this means that in this case the public companies will in the future become even more ‘public’.

What did change more drastically were the activities in which the different companies were involved. The legal unbundling forced the actors to choose between generation and supply on the one hand and transmission and distribution on the other hand. The municipal and inter-municipal companies were therefore obliged to terminate their supply activities. Consequently, private companies stepped in to fill the gap. So there was a privatisation of supply. Elia was created for the same reason, notably to assure that Electrabel and SPE would no longer be active in transmission. However, as already mentioned, Electrabel still has a significant participation in Elia. **(question 3.3)**

4. *ROLE OF GOVERNMENT AND OTHER STAKEHOLDERS*

4.1. *Role of government*

A government has different roles to play. Normally it will create different organisations for each role to reduce the inherent tensions that exist between these roles. These different roles of government can also be found in its relation with the electricity sector. First of all, government will act as a policymaker towards this sector. When it comes to policymaking, it is the Minister and its department that play an important role. At the federal level it is the Minister of Energy and the Federal Public Service Economy, SMEs, Self-employed and Energy that are in the first place responsible for policymaking (De Meulemeester e.a., 2006, p. 51). At the regional level, it is the Minister of Energy and the department of Environment, Nature and Energy that determine policy in Flanders (De Meulemeester e.a., 2006, p. 58).

An important platform for the making of policy is the Cellule CONCERE/ENOVER. It co-ordinates inter-regional and federal-regional co-operation. Its tasks become larger as more policy issues and technical details have to be considered. For example, the cellule has to ensure that the regions do not set different schedules and conditions for market liberalisation, since this could distort competition at the national level (IEA, 2001, p. 31). It is the task of CONCERE/ENOVER to develop detailed conditions for market liberalisation (IEA, 2001, p. 33).

Secondly, government also acts as a principal towards the electricity market. This role is also in hands of the Ministers and the departments at federal and regional level. A good example can be found at the Flemish level, where it is the Minister who determines public service obligations for the sector (Deconinck, 2004, p. 16). By developing public service obligations, the government can give certain responsibilities and tasks to the companies active in the market.

Furthermore, government supervises the sector. To be able to execute that function properly, the Belgian government created the federal regulator 'Commission for the Regulation of Electricity and Gas' (CREG) by two laws of 29 April 1999. The federal regulator 'Commission for the Regulation of Electricity and Gas' has two tasks: to give advice to the government with regard to the organisation and operation of the electricity and gas market and to control and supervise the application of the laws and regulations (CREG, 2006, p. 51). The regional regulators fulfil the role of supervisor of the market at the level of the regions. Another important organisation when it comes to the supervision of the market is the general competition authority (http://mineco.fgov.be/organization_market/competition/competition_council/competition_nl_004.htm).

Fourthly, the government is also responsible for guarding the public interest. Here again this responsibility is primarily in hands of the federal and regional regulators. For instance, the Flemish regulator 'Vlaamse Reguleringsinstantie voor de Electriciteits- en

Gasmarkt' monitors the market to ensure that the distribution network operators and suppliers comply with legal and statutory obligations, such as the public service obligations to which the various parties in the market are tied (www.vreg.be).

Finally, government can also act as an owner. In Belgium, it is in the first place the local governments that act as an owner, since they own the companies that are responsible for the distribution grid. Next to that, the local governments are also shareholder in some of the more important companies active in the electricity market. There is, however, not really a problem of conflicting roles in this case, since the role of government as an owner is situated at another level than the other roles. (**question 4.1**)

4.2. *Other stakeholders*

Not only the government played a role in this process of liberalisation and privatisation. Other stakeholders were also involved and some of them at times played a determining role. One of these stakeholders is the federal regulator 'Commission for the Regulation of Electricity and Gas'. Once it was established it pushed for new reforms to strengthen the liberalisation of the market (www.creg.be). The incumbent Electrabel, on the other hand, has tried to delay the process of liberalisation (Martens, 26.06.2006; PSE, 01.03.2003). One of the most important Belgian consumer organisations, Test Aankoop, also played a determining role by being a strong supporter of further liberalisation (www.test-aankoop.be). (**question 4.2**)

4.3. *Conflicts*

Social conflicts

The whole liberalisation process has, of course, not been free of conflicts. First of all, when the liberalisation process was given green light by the government, Electrabel decided to restructure its activities to be in a better position to face competition. This caused a social conflict, since the restructuring entailed a change of labour conditions. Moreover, 1700 jobs would be cancelled (SPI, 02.06.2001). As a result, only 14 000 people worked for Electrabel in 2003 (Sertyn, 4.10.2001), but that number went up again above the original level.

Other conflicts

There was also a conflict with the municipalities. They suffered a loss of revenue because of the liberalisation of the market, since they were forced to stop their activities in supply of electricity. Therefore, they demanded compensation (De Standaard, 18.06.2003).

Then there is the conflict between the small and larger suppliers. Eight small and new Belgian electricity suppliers united themselves in Enerp and they demand that a part of

their costs will be passed on to the larger players on the market. They claim that they have relatively higher costs compared to the larger suppliers (WLE, 27.06.2006).

Finally, the relation between the federal regulator 'Commission for the Regulation of Electricity and Gas' and the government has not always been conflict-free. For instance, the federal regulator 'Commission for the Regulation of Electricity and Gas' has been asking the government for more powers to execute its functions properly. Moreover, on occasions it has become clear that the government and the federal regulator 'Commission for the Regulation of Electricity and Gas' have different opinions on how to proceed with the opening of the market (Sertyn, 23.04.2005). (**question 4.3**)

CONCLUSIONS

The main conclusion is that there is still quite a lot to do before we can speak of a truly open electricity market. Important steps have been taken, like the legal unbundling of transmission and distribution from generation and supply. These steps, however, have so far not been completely implemented. Here we can think of Electrabel, which still has an important participation in Elia. Moreover, it is also unclear if the taken steps will be sufficient to reach the objective of an open market.

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