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COMMISSION FOR REGULATION
OF ELECTRICITY AND GAS

STUDY

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of

"the comparison of electricity prices for a household consuming 3,500 kWh grey electricity (single tariff) in Brussels, Paris, Berlin, Amsterdam and London"

carried out in application of Articles 23, §2, second paragraph, 2° of the Law of 29 April 1999 concerning the organisation of the electricity market

7 October 2010

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I INTRODUCTION

1. The objective of this study is to compare the structure of the electricity cost in June 2010 in Brussels with that of the capitals of various neighbouring countries. The customer in question will be a residential consumer with a single rented meter, consuming 3,500 kWh[1] grey electricity per year, with a power of 6 to 12 kVA, or a maximum single phase current of 80 A.

2. Concerning the validity of the data, we have contacted all the national regulatory agencies of the concerned countries and have taken their comments into consideration. Eurostat, as we will see, is not an excellent reference source for this subject.

3. The present study was approved by the Director's Board of the CREG during its reunion on 7 October 2010.

[1] This corresponds to the consumption level of an average-size household of 4 people living in 90m² (4 rooms and a kitchen). The electrical appliances are: lighting, radio, television, refrigerator, small electrical equipment, washing machine, dishwasher and storage water heater.

II EUROSTAT

4. Eurostat provides a global view of residential electricity prices, i.e. for Dc consumers (2,500 kWh to 5,000 kWh). The following prices result from the Eurostat document "Data in Focus"[2]. These prices match those of the second half of the year (2009S2), which are the latest available up to date statistics[3]. Some figures are missing for the network and the supplier. In fact, for some countries Eurostat does not mention how the difference between the total costs and the taxes and VAT is split up between network charges and supplier revenues.

Table 1: Electricity price in the second half of 2009, according to Eurostat, for households consuming 2,500 kWh to 5,000 kWh

Eurostat	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)
Belgium	658.70	114.45	51.80	N.A.	N.A.
Germany	802.90	128.10	199.15	196.35	279.30
France	428.75	61.60	44.10	N.A.	N.A.
Netherlands	647.50	105.00	56.00	N.A.	N.A.
United Kingdom	492.10	23.45	0.00	141.75	326.90

5. These figures should be considered with caution. In fact, there are taxes in the United Kingdom (like CESP (*Community Energy Saving Programme*) or CERT (*Carbon Emission Reduction Target*)). For Eurostat, however, they are comprised in the energy cost (*supplier*), which is also the case for the *Renewable Obligation Certificates*. It is therefore important to note that **Eurostat classifies as taxes only those appearing on the end consumer's bill as such.**

6. It should also be noted that these statistics are supposed to represent a national average. This is an important element when distribution costs are concerned, which are different from one region to another in certain countries.

[2] http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-10-022/EN/KS-QA-10-022-EN.PDF, visited on 16 July 2010.
[3] As of the time of writing, data for the first half of 2010 were available only for Germany.

7. Moreover, Eurostat makes no distinction neither between the tariff for single meters and the two-part time-of-use tariff nor whether green or grey electricity is being considered[4].

8. Finally, it is important to note that Eurostat frequently uses outdated information[5].

9. We contacted the Eurostat support services to get more information about their methodology[6]. Unfortunately, the information received did not enable us to increase our understanding of their price index significantly. There are very few countries for which all taxes are stated, much less their amounts.

[4] Grey electricity is power that is not entirely produced from renewable energies.
[5] The information concerning the structure of the cost of electricity still dates from 2006 for Belgium and France. In Britain, the "no-fossil fuel obligation", replaced by the "renewables obligation" (RO), continues to be mentioned in parallel with the RO.
[6] See request FR1570 and its attachments, in the Eurostat assistance facility (https://ec.europa.eu/eurostat/xtnetassist/request.htm?id=21710&tab=1). Login and password can be obtained from the author. The document obtained is relatively disappointing. The information on the Netherlands and Germany is not very detailed, and that for Belgium has not been updated since 2006. Only the data for the United Kingdom and France are pertinent.

III THE HEPI METHOD

10. Every month, the VaasaETT Global Energy think tank publishes electricity price indices (HEPI = Household Energy Price Index) for the residential sector in European capitals[7]. In addition to a global price level, breakdown of the price into four components (VAT, taxes, distribution and energy) is also published. See table 2 for an overview of this index for June 2010.

11. The calculation method covers two stages: first, the price of three different electricity offers for each capital is calculated. The first offer is the "standard" offer of the historical operator (e.g.: EDF's regulated offer in Paris, or the price of Electrabel's basic offer in Brussels). The second offer is the "market offer" of the historical operator (e.g.: EDF's market price offer in Paris). The third is the offer of the principal competitor of the historical operator (e.g.: Lampiris in Brussels). Then, the weighed average of these three offers, with the market shares being used as weighing factors, is calculated.

Table 2: Electricity price for households according to the HEPI index, June 2010

HEPI	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)
Belgium	750.80	127.65	45.05	281.55	296.55
Germany	797.30	127.55	167.45	191.35	310.95
France	461.65	69.30	55.30	166.25	170.80
Netherlands	606.20	96.95	54.60	182.00	272.65
United Kingdom	484.05	24.20	24.20	77.45	358.20

[7] The monthly indices are available on http://www.vaasaett.com/projects/hepi/latest-press-release/.

IV OWN COMPARISON

12. The objective of this chapter is to reconstruct the HEPI table for June 2010 on the basis of publicly available data. We shall no longer dwell on Eurostat, as this reconstruction exercise is associated to a high level of risk.

13. In fact, Eurostat uses, first of all, national averages, while we will concentrate on the electricity cost in the capital cities. For Belgium, for example, this can have an impact on the network cost, as the distribution network operator tariff is not the same on the entire territory. A second difference is found in the definition of the typical user. Eurostat uses a range from 2,500 kWh to 5,000 kWh, regardless of the contract type (single or two-part time-of-use tariff, green or grey electricity, etc.). It is the total annual consumption that enables determination of the category in which a residential consumer is placed. In our approach, we have taken an average consumption of 3,500 kWh with a single meter for grey electricity. It can therefore not be said that our comparison is based on the same elements as that developed by Eurostat.

14. As concerns the HEPI method, it is, as already explained, based on the weighting of three electricity offers. We should also emphasize that the offers being compared by HEPI are based on a single (and not two-part time-of-use) tariff. Finally, the amount of energy for HEPI is not 3,500 kWh, but the national residential average. Thus, in Norway, this average is much higher than in our country (18,000 kWh) due to the generalized use of electric heating[8].

[8] Information delivered by HEPI.

IV.1. Belgium

IV.1.1. Tariffs and taxes

IV.1.1.1. Distribution and transport

I. The DNO in Brussels is Sibelga, and the price is 8,3294 c€/kWh including VAT[9] or 83.29 €/MWh.

II. Transport (Elia): 1,05222 c€/kWh including VAT[10] or 10.52 €/MWh.

III. Meter rent (at Sibelga): 9.90 €/year including VAT[11].

IV.1.1.2. Taxes

I. Federal contributions[12]:

i. Lampiris (green energy): 0.1890 c€/kWh including VAT or 1.89 €/MWh.

ii. Electrabel (grey energy): 0.49644 c€/kWh including VAT or 4.96 €/MWh.

II. Energy dues: 0.23096 c€/kWh including VAT[13] or 2.31 €/MWh.

III. Public service obligation: between 9,6 and 13 kVA: 20.47 €/year[14] including VAT.

IV. Renewable energies contribution. This is the green certificates system. This obligation is determined on a regional basis. In Brussels, each supplier must deliver 2.75 green certificates for every 100 MWh delivered.

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[9] Source: Lampiris offer: http://www.lampiris.be/fr/tarif_energie_verte_pdf.php?region=1&particulier_ou_societe=particulier, visited on 7 July 2010.

[10] See the price offers of Lampiris & EBL and http://www.sibelga.be/uploads/assets/107/1273491213973-Elia-2010-2012.pdf, visited on 8 July 2010. VAT is not included in the PDF-file.

[11] See the Electrabel price offer.

[12] See the Electrabel and Lampiris price offers, see Electrabel's price offer. Source: http://www.sibelga.be/uploads/assets/107/1273491213973-Elia-2010-2012.pdf, and http://www.creg.be/pdf/Tarifs/E/2010/CotFed/CotFedE2010FR.pdf, visited on 8 July 2010. See also art. 5, §1, R.D. of 24 March 2003 defining the terms of federal contribution to the financing of certain public service obligations and the costs of regulation and control of the electricity market. This tax is intended to finance the CREG, the protected customers, the Kyoto fund, nuclear liabilities, etc.

[13] See the price offers of Electrabel & Lampiris. This tax is intended to the financing of social security (http://www.iewonline.be/IMG/pdf/587position-070219-prixbaril.pdf, visited on 8 September 2010).

[14] This is the same value as indicated by HEPI.

The cost depends on the electricity supplier. In this respect, reference is made to the next section. Furthermore, as is the case for England, we are including this cost in the "supplier" and not in the "taxes" category, as a supplier obtaining its electricity from a 100% green producer who also provides certificates will consider this renewable tax as a source of revenues.

IV.1.1.3. *VAT*

15. The rate applied is 21%, and is levied on the taxes and the energy, transport and distribution costs.

IV.1.2. Tariff formulas of some electricity suppliers

16. IMPORTANT: as opposed to the offers of other access suppliers, these costs do not comprise taxes and network tariffs.

Table 3: Offers of different electricity suppliers in Brussels (June 2010)

Contract type	Fixed costs incl. VAT (annual subscription)	Variable costs incl. VAT	Market share
EBL basic option (indexed)	**79.26 €/year**	**0.07885 €/kWh or 78.85 €/MWh**	**40.00%**
EBL Energy +	**77.67 €/year**	**0.07728 €/kWh or 77.28 €/MWh**	**20.00%**
Lampiris	**40.00 €/year**	**0.07510 €/kWh or 75.10 €/MWh**	**5.00%**

17. The cost of energy also comprises the green contribution or the renewable energy contributions. The additional costs are charged to the end customer to support the purchasing cost of green certificates and amount to:

I. Electrabel: 0.249 c€/kWh including VAT or 2.49 €/MWh
II. Lampiris: 0.333 c€/kWh including VAT or 3.33 €/MWh

18. This additional cost does not necessarily correspond to the purchasing cost of the green certificates faced by the suppliers.

Table 4: Summary of the other components of the energy cost in Brussels (June 2010).

Item	Amount incl. VAT
Distribution	83.29 €/MWh
Transport	10.52 €/MWh
Meter	9.90 €/year
Federal contribution	Electrabel: 4.96 €/MWh; Lampiris 1.89 €/MWh
Energy contribution	2.31 €/MWh
Public service obligation	20.47 €/year
Contribution renewable energy	Electrabel: 2.46 €/MWh; Lampiris: 3.30 €/MWh

IV.1.3. Calculation of the breakdown of electricity cost

Table 5: Electricity price breakdown in Brussels (June 2010)

Brussels	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Basic EBL	748.15	129.84	37.96	279.55	300.80	40.00%
EBL Energy +	741.05	128.61	37.96	279.55	294.93	20.00% (*)
Lampiris	687.94	119.39	29.06	279.55	259.93	5.00%
Weighted average	741.33	128.66	37.27	279.55	295.85	

(*) estimates

19. Brugel, the regional Brussels regulator, provides market share information[15]. Thus, we learn that 40% of customers in Brussels are still under contract with the default operator, i.e. Electrabel (basic option). In addition, Lampiris is the second biggest supplier for private households in Brussels, with a 5% market share. Electrabel has a 90% residential sector market share in Brussels. If we deduct the 40% default users, this would amount to 50% of residential customers being under contract with Electrabel (ECS). We could also assign 20% of total market share to the Energy+ contract.

[15] http://www.brugel.be/Files/media/stat/Statistiques_courant_version-definitive.pdf, visited on 23 July 2010.

IV.2. France

20. The CRE communicated that the most common power in France is 6 kVA.

IV.2.1. Tariffs and taxes

IV.2.1.1. Public Electric Networks Utilisation Tariff (Tarif d'utilisation des réseaux publics électriques – TURPE)

21. The TURPE[16] is set by Ministerial Order, based on the proposal of the CRE (the French national regulator). The TURPE can be subdivided into nine components, three of which are pertinent for residential customers.

22. These three components for the low voltage sector are as follows: **a management component** (8.04 € before VAT per year for a single supply and distribution contract), **a meter component** (16.80 € before VAT per year for powers between 0 and 18 kVA) and **a draw-off component** ("short use" tariff: 18.72 € before VAT per year for the fixed part (or 3.12 €/kVA * 6 kVA), and 0.0315 € before VAT / kWh (31.50 €/MWh) for the variable part). We therefore find that the TURPE consists of a variable portion that depends on consumption, and of a fixed part of 43.56 € before VAT per year (i.e. 8.04 € + 16.80 € + 18.72 €).

IV.2.1.2. Contribution to the Public Electricity Service [Contribution au service public d'électricité (CSPE)]

23. This contribution – or tax – is paid to the network operator, ERDF (*Electricité Réseau Distribution France*), via the electricity supplier in case of a single contract. There are multiple[17] allocations for the CSPE; it comprises, in particular, financing of the TARTAM (Tarif Réglementé Transitoire d'ajustement de Marché, or regulated transitional market adjustment tariff – a regulated tariff for businesses), the social tariff, the feed-in tariffs, etc.

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[16] The last version of the 3rd TURPE came into effect on 1 August 2010. See http://www.erdfdistribution.fr/medias/Institutionnel/TURPE_3_Bareme_2010.pdf, for more information on this subject. Given that our comparison concerns the month of June, we will not take this last increase into account.

[17] See http://www.cler.org/info/article.php3?id_article=3953 (visited in April 2010) for an illustration of the allocation of the CSPE.

24. The CSPE amounts to 0.045 € before VAT per kWh supplied (or 4.50 €/MWh).

IV.2.1.3. Routing Contribution Tariff [Contribution tarifaire d'acheminement (CTA)]

25. It is included in the electricity transport cost listed on the bill. This additional charge is intended to ensure the financing of the network operators' pension fund (CNIEG, the National Electricity and Gas Industry Pension Fund).

26. It amounts to 21% on the fixed part of the TURPE[18], i.e. to 21% of 43.56 €, or 9.15 € before VAT per year.

IV.2.1.4. Local Electricity Taxes [Taxes locales sur l'électricité (TLE)]

27. These taxes comprise the municipal and departmental taxes. They are billed to the end consumer, and the revenues are distributed to the local authorities.

28. For residential customers (maximum power equal to or less than 36 kVA), the base for this tax is 80% of the total amount of the electricity bill before taxes (including both subscription and consumption), and its average percentage is 11%[19]. The maximum rate is usually 12% (8% for the municipality + 4% for the department), except in Paris, where the rate is 13.2%[20].

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[18] See http://www.vialis.tm.fr/degn/cta_437.php for the calculation of the CTA.
[19] Source: http://www.erdfdistribution.fr/medias/Institutionnel/plaquette_turpe_2009.pdf visited on 23 April 2010, see also http://www.cre.fr/fr/marches/marche_de_l_electricite/marche_de_detail for a system overview.
[20] http://www.fournisseurs-electricite.com/fournisseurs-delectricite-par-ville/46-ville/647-paris, visited on 2 June 2010.

IV.2.1.5. VAT

29. The VAT rates vary within the residential sector[21]. In fact, for a maximum power of less than 36 kVA, the rate is 5.5% for the subscription, including CTA and local taxes, while it is 19.6% on the energy price, including local taxes and CSPE.

IV.2.2. Tariff formulas of some electricity suppliers

30. Today, there are two types of offer in France: the first is an offer with a regulated tariff model[22], and the second is the market offer. Within the scope of this study, we have chosen to determine the electricity price in the 13th district of Paris (postal code 75013) with an apparent power of 6 kVA.

Table 6: EDF offers (June 2010)

Contract type	Fixed costs incl. VAT (annual subscription)	Variable costs incl. VAT
Regulated price (blue tariff)	**77.08 €**	**0.1081 €/kWh or 108.10 €/MWh**
Market price	**96.54 €**	**0.1203 €/kWh or 120.30 €/MWh**

Table 7: Direct Energie offer (June 2010)

Contract type	Fixed costs incl. VAT (annual subscription)	Variable costs incl. VAT
Fixed price for one year	**77.08 €**	**0.1029 €/kWh or 102.90 €/MWh**

31. There are other electricity suppliers in France (e.g. Poweo). A comparison of their offers can be found on http://www.energie-info.fr/. The CRE markets observatory report provides an idea of the market shares held by the various players in the residential sector as of 30 June 2010[23]. The EDF Regulated model is said to have 95% of the market, and the

[21] http://www.cre.fr/fr/marches/marche_de_l_electricite/marche_de_detail visited on 16 July 2010.
[22] Regulated tariffs are jointly set by the Ministers in charge of the Economy and Energy, based on the CRE's advice. They are such that they make it possible to cover the tariff for the use of the public electricity networks, production costs and the commercial costs of the historical supplier, EDF. These tariffs therefore depend on the customer category.
[23] http://www.cre.fr/fr/marches/observatoire_des_marches, visited on 2 September 2010.

EDF Market Offer approximately 0.05% of the market. The most important alternative energy operator would be Direct Energie[24].

IV.2.3. Calculation of the breakdown of electricity cost

Table 8: Electricity price breakdown in Paris (June 2010)

Paris	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
EDF Regulated	455.43	66.02	59.71	153.81	175.88	95.00%
EDF Market	517.59	74.03	64.89	153.81	224.86	0.05 %
Direct Energie	437.23	63.04	58.26	153.81	162.12	1.70% (*)
Weighted average	455.15	65.97	59.69	153.81	175.67	

(*) approximations[25].

IV.3. Germany

IV.3.1. Tariffs and taxes

IV.3.1.1. Network related costs

32. Transport and distribution (*Netzentgelt*). The transport and distribution network operator in Berlin is Vattenfall. The combined cost of low-voltage transport and distribution is 4.56 c€/kWh[26] or 45.60 €/MWh.

[24] http://www.fournisseurs-electricite.com/electricite-de-france/actus-edf/39-edf/222-parts-de-marche-des-fournisseurs-delectricite, and http://groupe.direct-energie.com/le-groupe-direct-energie/ouverture-marche-energie.html, visited on 4 June 2010

[25] Markets Observatory, report as of 30 June 2010, http://www.cre.fr/fr/content/download/10124/170465/file/2010Observatoire2emeTrim-elecdetail.pdf, visited on 3 September 2010. We looked at 50,000 Direct Energie client households out of a total of 29,900,000 households. The other market shares are directly reproduced or calculated from data available in the Markets Observatory report.

[26] http://www.vattenfall.de/www/dso/vf_dso/Gemeinsame_Inhalte/DOCUMENT/264535vatt/585859entg/585953zuga/1923601ent/P0283739.pdf, visited on 26 May 2010.

33. Besides transport and distribution, the bill must be supplemented with the metering charges (*Messung, Messstellenbetrieb und Abrechnung* – meter reading, meter renting and billing)[27]. Meter rental (*Messstellenbetrieb*) amounts to 7.80 €/year, while reading (*Messung*) costs 3.27 €/year. Billing charges (*Abrechnung*) amount to 11.73 €/year.

IV.3.1.2. Environmental tax (Ökosteuer)

34. This tax was introduced in 1999 and is based on fossil fuels and grey electricity[28]. It amounts to 20.50 €/MWh[29], or 2.05 c€/kWh. Renewable energies are exempted. The current tax legislation provides for tax reductions/exemptions and tax relief (e.g. for storage heaters[30]).

IV.3.1.3. Concession (Konzessionsabgabe)

35. It represents a levy paid to the council for the assignment of the right to use connection routes and different types of piping (water, electricity, gas, etc.). This levy depends essentially on the size of the community (the population), the voltage of the network connection (low and medium voltage) and the consumption structure. This is an important source of revenues for the towns and municipalities. This tax amounts to 2.39 c€/kWh, or 23.90 €/MWh per year for Berlin[31].

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[27] http://www.vattenfall.de/www/dso/vf_dso/244938entge/245058netzz/index.jsp, visited on 26 May 2010.
[28] http://www.stromsteuer.de/oekosteuer.htm, visited on 26 May 2010.
[29] http://www.steuerartenueberblick.de/oekosteuer_-_stromsteuer.htm, visited on 26 May 2010
[30] http://www.stadtwerke-bochum.de/index/privatkunden/energiepreise/steuern.html, visited on 25 May 2010.
[31] http://www.vattenfall.de/de/distribution/file/PreisblattNetzentgeltefuerLastpro_83739_14423691_snapshot.pdf, visited on 1 September 2010. Note that this amount is not representative for Germany. On average, the cost of this charge is 15.20 €/MWh.

IV.3.1.4. *Cogeneration tax (Kraft-Wärme-Kopplungsgesetz)*

36. The purpose of this tax is to support combined heat and power plants. It amounts to 0.130 c€/kWh[32] or 1.30 €/MWh and has significantly changed over time[33].

IV.3.1.5. *Renewable energies contribution (EEG-Umlage)*

37. With this tax, the government encourages production of energy from renewable energy sources. Statistics are available on the German regulator's site[34]. This tax amounts to 2.047 c€/kWh[35] or 20.47 €/MWh.

IV.3.1.6. *VAT (Mehrwertsteuer, Value Added Tax)*

38. The VAT rate is 19%, and it is charged on all the above mentioned components.

IV.3.2. Tariff formulas of some electricity suppliers

39. The reference city is Berlin, and more particularly the Berlin-Mitte district, which is considered to be the centre of the capital. We will use 10179 as the postal code[36].

40. Vattenfall is the biggest electricity supplier in Berlin. The company bought up Bewag in 2003[37]. The "basic formula" is the default formula. Vattenfall's most competitive formula is the "easy" offer. Finally, we will choose Flexstrom DeutschlandsBest 12m as a rival offer.

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[32] http://www.eeg-kwk.net/cps/rde/xbcr/eeg_kwk/2009-10-09_KWK-Aufschlag2010_Internettext.pdf, visited on 26 May 2010.
[33] http://www.eon-edis.com/media/KWK_Umlage.pdf, visited on 26 May 2010.
[34] http://www.bundesnetzagentur.de/cae/servlet/contentblob/153014/publicationFile/6555/100427StatistikberichtEEG2008pdf.pdf), visited on 25 May 2010.
[35] http://www.eeg-kwk.net/cps/rde/xchg/eeg_kwk/hs.xsl/484.htm (official site), http://www.stadtwerke-bochum.de/index/privatkunden/energiepreise/steuern.html and http://www.50hertz-transmission.net/cps/rde/xchg/trm_de/hs.xsl/1531.htm, visited on 25 May 2010.
[36] There are a number of different postcodes: 10115,10117,10119,10178,10179.

Table 9: Offers of different electricity suppliers in Berlin (June 2010)

Contract type	Fixed costs incl. VAT (annual subscription)	Variable costs incl. VAT
Flexstrom DeutschlandsBest 12m[38]	**102.00 €**	**0.182 €/kWh or 182.00 €/MWh**
Vattenfall Basis[39]	**70.80 €**	**0.2023 €/kWh or 202.30 €/MWh**
Vattenfall easy	**67.20 €**	**0.1915 €/kWh or 191.50 €/MWh**

IV.3.3. Calculation of the breakdown of electricity cost

41. Concerning the market share, the German regulator informs us that Vattenfall has a 77% market share. The default offer corresponds to 60% of Vattenfall's contracts, or 45% of the market, whereas the others represent 40% of Vattenfall's contracts. The German regulator considers it appropriate to attribute this 40% to Vattenfall's Easy offer (or 32% market share) and the rest of the market (23% market share) to the Flexstrom offer.

Table 10: Electricity price breakdown in Berlin (June 2010)

Berlin	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Vattenfall Basis	778.85	124.35	231.60	182.40	240.50	45.00%
Vattenfall Easy	737.45	117.74	231.60	182.40	205.71	32.00%
Flexstrom	739.00	117.99	231.60	182.40	207.01	23.00%
Weighted average	756.44	120.78	231.60	182.40	221.67	

[37] http://www.fundinguniverse.com/company-histories/Bewag-AG-Company-History.html, visited on 9 June 2010.
[38] http://www.verivox.de/power/calculator.aspx, visited on 6 October 2010.
[39] http://www.vattenfall.de/www/vf/vf_de/1965977priva/202406priva/2037880strom/index.jsp, visited on 20 August 2010.

IV.4. The Netherlands

IV.4.1. Tariffs and taxes

IV.4.1.1. Transport and distribution

42. These amounts are paid to the network operators (e.g. Enexis for distribution – Noord Holland province, where Amsterdam is located). Since 1 January 2009, the network costs tariff has been adapted. The variable costs (per kWh) were in fact replaced with a *capaciteitstarief* [capacity tariff] which depends on the capacity. The chosen capacity amounts to up to 3x25 A. The transport cost is included in the *capaciteitstarief*. N.B.: this amount is not collected by the electricity supplier. For the moment, and according to the supplier, a bill is sent by the distribution network operator directly to the final consumer, and not by the supplier. In the future, only the supplier will send this bill[40].

The tariffs, which are set by the *energiekamer* (formerly the DTe), for transport and distribution comprise[41]:

a. connection fees[42]:

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[40] See NMa's e-mail message.

[41] http://www.enexis.nl/site/over_enexis/onze_tarieven/consumenten_mkb.jsp, visited on 4 May 2010. See also: http://www.enexis.nl/site/Images/Tarieven%20Enexis%20Kleiverbruik%20Elektriciteit%20en%20Gas%202010.pdf, visited on 21 May 2010.

[42] http://www.enexis.nl/site/over_enexis/onze_tarieven/consument_mkb_eenmalig_elektriciteit.jsp, visited on 4 May 2010. For the other capitals, the connection charges consist of a single fixed fee for the entire lifespan of the site. The case of the Netherlands, with annual connection fees, is therefore special. In Brussels, connection of a new meter with Sibelga costs 1,520.97 € incl. VAT (http://www.sibelga.be/fr/nos-tarifs/tarifs-raccordements-et-compteurs, visited on 1 September 2010). In Paris, connection is paid for partly by TURPE. The cost of a connection which is not covered by TURPE is called "the contribution." The connection fee is available on http://www.erdfdistribution.fr/medias/Racc_bareme/ERDF-PRO-RAC_03E.pdf, pp. 25-27 (visited on 1 September 2010). The cost varies depending on the length of the connection. Generally, the cost is in the region of 1,500 € before VAT. It should also be noted that the postal code 75013 is part of the 4th connection zone. In London, a simple connection costs 1,100 £ (or 1,243.00 €) (see http://www.edfenergy.com/products-services/networks/pdf/IDNO_CCCM_and_CS_Final_v2_CLEAN_-_incl___Ofgem_changes_v2_0_kk_110810_track_changes_accepted.pdf, p. 34, visited on 1 September 2010). In Berlin, Vattenfall also bills a single price for the entire life of the connection. Generally, the cost is in the region of 1,000 € (see http://www.vattenfall.de/de/distribution/file/PreisblattAnschlussNSPBerlin_01_76247_14427920_snapshot.pdf, visited on 1 September 2010). Finally, we should point out that connection is open to competition in England ("competition in connections") and in the Netherlands.

i. cost of installation (one-time charge): 675.92 € incl. VAT. This cost is not pertinent for the analysis we are carrying out.

ii. variable part: (Periodieke aansluitvergoeding, or Periodic connection charge): 31.42 €/year incl. VAT (26.40 €/year before VAT).

b. distribution costs:

i. fixed part (vastrecht transport [fixed charge for distribution]): 21.42 €/year including VAT.

ii. part depending on the capacity (capaciteitstarief): 126.19 €/year including VAT.

c. transport fees (systeemdiensten, or system services): 6.16 €/year including VAT. They are paid to TenneT[43], the national transport operator.

d. Metering charges (rental + reading): 30.14 €/year including VAT (25.33 €/year before VAT).

IV.4.1.2. *Energy taxes*

43. There is a variable tax collected by the supplier, and paid over to the government. The tax is the "regulerende energie belasting" [regulating energy tax] and applies to electricity at 0.1114 €/kWh before VAT[44] or 111.4 €/MWh.

44. Part of the energy consumed is not taxed, but translated into a fixed tax refund. If, globally, less taxes are due than the amount of the refund, the customer nevertheless enjoys a reduction on his/her bill. This refund is granted on the amount including VAT, and amounts to 379.16 €[45] (or 318.62 € before VAT). **Why this refund?** The Dutch government assumes the principle that it is impossible to reduce one's electricity consumption down to zero, as there is always a fundamental consumption that is required to cover basic necessities. As a result, the government decided not to tax this "essential electricity consumption", resulting on this tax refund linked to electricity consumption[46].

[43] http://www.energieverbruik.org/rekenmodellen/20090105_E_hh_zakelijkklein_2009_tcm86-127769.pdf, visited on 21 May 2010. Note: The tariffs are different from those on the Enexis site: the date is different.
[44] http://www.deenergiegids.nl/Regulerende-Energie-Belasting.aspx, visited on 21.05.10.
[45] http://www.electrabel.nl/Thuis/Producten/Toelichting_tarieven.aspx, visited on 21 May 2010.
[46] http://www.gaslicht.com/energie-faq/de-energienota.aspx, visited on 7 July 2010. See also: *Consuwijzer*. This corresponds to a 1500 kWh exemption of the energy tax: http://www.deenergiegids.nl/Regulerende-Energie-Belasting.aspx, visited on 7 July 2010.

IV.4.1.3. VAT

45. VAT applies to the supply, distribution and transport costs as well as to the taxes. The rate is 19%.

IV.4.2. Tariff formulas of some electricity suppliers

46. In the case of Amsterdam, we have been unable to find sufficiently complete information on the market share of the various suppliers[47] or on the default operator in the city. The comparison will then reflect the offer of three important suppliers in the Netherlands, i.e. Essent, Nuon and Electrabel. Each offer will be considered to have the same market share.

Table 11: Offers of different electricity suppliers in Amsterdam (postal code 1012 NX) (June 2010)

Contract type	Fixed costs incl. VAT (annual subscription)	Variable costs incl. VAT
EBL Standaard, 1 year, variable prices[48]	**25.00 €**	**0.2175 €/kWh or 217.50 €/MWh**
Essent KeuzeTarief Standaard, variable prices[49]	**24.99 €**	**0.2247 €/kWh or 224.70 €/MWh**
Nuon, variable prices[50]	**23.88 €**	**0.2180 €/kWh or 218.00 €/MWh**

[47] The Dutch regulator was not able to give us further information on this subject.
[48] http://www.electrabel.nl/Thuis/Producten/Elektriciteit/EenJaarVariabel.aspx#, visited on 20 August 2010.
[49] http://www.essent.nl/content/particulier/producten/stroom_en_gas_variabel/index.html?region=1&error=1&postcodeCijfers=1012&postcodeLetters=nx&huisnummer=1#tab-2, visited on 9 June 2010.
[50] http://www.nuon.nl/producten-en-diensten/stroom/standaard-stroom/variabele-energieprijzen.jsp?tab=Variabele%20prijzen, visited on 9 June 2010.

IV.4.3. Calculation of the breakdown of electricity cost

Table 12: Electricity price breakdown in Amsterdam (June 2010)

Amsterdam	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Nuon	623.04	99.48	71.28	180.95	271.34	33.33% (*)
Essent	647.60	103.40	71.28	180.95	291.98	33.33% (*)
Electrabel:	622.41	99.38	71.28	180.95	270.81	33.33% (*)
Weighted average	631.02	100.75	71.28	180.95	278.05	

(*) We have no information on the market shares of the different electricity suppliers. We shall therefore proceed with a non-weighted average.

IV.5. United Kingdom (UK)

47. The site of the British regulator, Ofgem, provides information on the breakdown of the electricity bill of residential customers[51]. We will be reproducing the pertinent components.

48. It should be pointed out directly that taxes in England are proportionally lower than in continental Europe[52]. We should also underline that in England, the two-part time-of-use tariff is called “Economy 7”.

49. For the exchange rate, we used the purchasing power parity approach. These rates can be found on: www.oecd.org/std/ppp. In June 2010, the rate was 113, i.e. one pound sterling is worth 1.13 € when reducing the differences due to price levels. The PPP approach exchange rate is therefore 0.88 £/€.

[51] http://www.ofgem.gov.uk/Media/FactSheets/Documents1/updatedhouseholdbills09.pdf, visited on 27 April 2010.
[52] See the Ofgem *fact sheet*.

IV.5.1. Tariffs and taxes

IV.5.1.1. Transmission tariff

50. This tariff is called "Transmission Use of System" (TNUoS) and is paid back to the TSO (the National Grid). The transmission costs are divided among the producers and the consumers. Rates are set annually and are different for each zone. Thus, for example, the rates applying from April 2010 onwards were published on 29 January 2010[53]. The Excel sheet that summarizes the rates[54] comprises two tabs, one with the generation (production) tariffs, and the other with the consumption (supply) tariffs. As concerns the consumption tariffs, there are two types of consumers: those with a meter that is read every half hour (*half-hourly (HH) metered customers*), and those with a standard meter (*non-half-hourly (NHH) metered customers*).

51. We will not address HH meters, because they are only used on commercial and industrial sites. As concerns the NHH meters, the supplier must pay the National Grid (the TSO) the consumption of the NHH sites between 4pm and 7pm each day of the year, multiplied by the tariff. The tariff in effect from 1 April 2010 onwards is 3.60 p£/kWh or 44.64 €/MWh[55].

52. The "charging team" of the UK TSO[56] explained that an estimate is made of household consumption between 4pm and 7pm. On the basis of this estimate, the suppliers then pay the TSO. Next, an adjustment is made further to the actual household consumption measured. There is therefore a socialization of the transmission costs for households (a household consuming more than the estimated amount between 4pm and 7pm will not proportionally pay more than a household consuming less than the estimate during that period although it is a peak period).

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[53] http://www.nationalgrid.com/uk/Electricity/Charges/usefulinfo/, visited on 11 May 2010.
[54] http://www.nationalgrid.com/NR/rdonlyres/5A82B165-D300-4E23-8774-8F8656463242/40871/FinalTariffs2010_2012.xls, visited on 11 May 2010. The tariffs published by the national grid, concerning demand, take into account the discount for low generation.
[55] p = pence £. http://www.nationalgrid.com/NR/rdonlyres/A2EAC348-38D8-403C-8A2D-E080E504B39C/39557/FinalTNUoStariffsfor2010.pdf, visited on 11 May 2010.
[56] Can be reached at the (National Grid - +44 1926 654633; http://www.nationalgrid.com/NR/rdonlyres/A2EAC348-38D8-403C-8A2D-E080E504B39C/39557/FinalTNUoStariffsfor2010.pdf, visited on 11 May 2010.

53. In an email of 28 May 2010, Ofgem explains that in order to calculate the electricity consumed during that period it is necessary to multiply the household's annual consumption by three factors:

I. *Peak share*: 0,1798
II. *Distribution Loss Adjustment factor*: 1,084
III. *Transmission losses*: 1,0186

The first two factors (Peak Share and Distribution Loss Adjustment factor) are published in the distribution tariff calculations: example of the transmission cost calculation: 3,500 kWh x 0.1798 x 1.084[57] x 1.0186[58] = 694.85 kWh. This quantity, multiplied by 0.036 £, which is the tariff for the use of the transmission network, results in a cost of 25.01 £ or 28.27 € per year.

IV.5.1.2. *Distribution tariffs*

54. As concerns the regulated distribution costs, they differ for each DNO, or distribution network operator. We will base our observations on the DNO for London, LPN (London Power Networks), owned by EPN – EDF Power Networks[59], and which will soon become the property of Li Ka-Shing.

55. The distribution tariff has two parts. First of all, the variable part, which amounts to 1.433 p£/kWh (or 16.19 €/MWh), and, finally, the fixed portion, for each MPAN (Meter Point Administration Number) at 3.25 p£ per day[60], i.e. 11.86 £ or 13.40 € for the fixed costs per year. For a consumption of 3,500 kWh, the distribution costs amount to 62.02 £, or 70.08 € per year including fixed and variable costs.

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[57] Distribution Loss Adjustment factor: http://www.edfenergy.com/products-services/networks/pdf/LPN_UoS_Charging_Statement_011009_40_Day_Notice.pdf, page 23/25, period 5 for domestic profiles, visited on 31 May 2010. It is also available at http://2010.energynetworks.org/structure-of-charges/

[58] Transmission Loss Adjustment factor: Estimated by Ofgem, and sent to us by email.

[59] The tariff can be found at http://2010.energynetworks.org/structure-of-charges/ (visited in May of 2010).

[60] See the "Tariffs" tab in the Excel sheet. On the electricity bill (e.g., http://simplyswitchinsurance.com/what-is-standing-charge.html, visited on 11 May 2010), this item is called standing charge, i.e. the price of network connection (http://simplyswitchinsurance.com/what-is-standing-charge.html, visited on 11 May 2010). In the Ofgem fact sheet, this item is stated as a meter provision and amounts to 4.5 £ or 5.08 €. However, this figure dates from 2006-2007 and represents a national average. It will therefore not be used in this study.

IV.5.1.3. Renewables Obligation (RO)

56. The RO is the principal support mechanism for renewable energies[61]. It imposes on electricity suppliers the obligation to buy part of the electricity they supply from electricity producers using renewable sources, and places an indirect obligation on consumers to subsidise this type of electricity[62]. The system is based on certificates (*Renewables Obligation Certificate* (ROC)). A certificate is delivered for each MWh produced by renewable energies. A few figures from the Annual Report 2008-2009 of Ofgem[63], the British regulator:

- Of the obligation of renewable energy production, 65% were met.
- The fine for failing to present enough certificates (or "buy-out rate") is currently 36.99 £ or 41.80 € per ROC[64].
- In 2010-2011, in England, Wales, and Scotland, the supplier must present 11.1 ROC for each 100 MWh supplied. This will gradually increase (15.4 ROC in 2015 / 2016)[65].
- At the auction of 24 June 2010, the average price for 1 ROC was 49.16 £[66], or 55.55 €.

57. In order to calculate the ROC costs for the supplier, we will use the amount of the fine, and not the market value. The market value is greater than the amount of the fine because the suppliers which have ROCs split among themselves the cost of the fine paid by the suppliers who were not able to meet their obligations. Thus, some revenue can come from having a ROC. The ROC market value henceforth does not make up the total cost of the ROC, because the revenue which comes from having an ROC must be deducted.

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[61] http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Pages/RenewablObl.aspx, visited on 28 April 2010. There are many faults in this system, which is considered too costly for the results obtained. See http://www.ref.org.uk/Files/rb.jc.ref.roc.05.09.08.pdf, visited on 28 April 2010. Note that this RO system can act as a limit to the maximum level of renewable electricity, and not as an objective. Indeed, the ROC price declines, reaching a marginal value of 0 once the RO objective has been met.

[62] http://www.sswfag.org.uk/docs/Wind%20power%20subsidy%20in%20the%20UK.doc, visited on 28 April 2010.

[63] http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Documents1/Annual%20Report%202008-09.pdf, visited on 28 April 2010.

[64] http://www.ofgem.gov.uk/Media/PressRel/Documents1/RO%20Buy-Out%20price%202010%2011%20FINAL%20FINAL.pdf, visited on 28 April 2010 or http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Documents1/Supplierguidance.pdf p. 27, visited on 31 May 2010.

[65] http://www.ref.org.uk/Files/rb.jc.ref.roc.05.09.08.pdf, visited on 28 April 2010.

[66] http://www.e-roc.co.uk/trackrecord.htm, visited on 20 August 2010.

Consequently, the maximum cost that a supplier pays for the ROCs is the cost of the fine. The ROCs therefore can be considered to have a cost of 3.50 £ x 0.111 x 36.99 = 14.37 £ = 16.24 € per year.

IV.5.1.4. Carbon Emission Reduction Target[67] (CERT)

58. The UK government imposed a reduction of 185 $MtCO_2$ on gas and electricity suppliers for the period of 2008-2011. This is the main programme for improving energy efficiency (lighting, insulation, etc.).

59. The Ofgem *fact sheet* indicates that the programme costs, on average, 45.00 £ per year and household (gas and electricity). In order to determine the part of the CERT attributable to electricity, the Ofgem approach consists in dividing this amount by two. Thus, the residential electricity consumer will have to pay 22.50 £, or 25.42 €, per year for CERT.

IV.5.1.5. Community Energy Saving Programme (CESP)

60. The estimate in the Ofgem *fact sheet* is of 3.00 £ for the gas and electricity bills together. This is therefore equivalent to 1.50 £, or 1.69 €, per year for electricity.

IV.5.1.6. VAT

61. The VAT rate is 5% in the residential sector.

IV.5.2. Tariff formulas of some electricity suppliers

62. The historical operator in London is the London Electricity Board (LEB), which has been bought up by EDF. Before regulation, all consumers had to get their electricity from the

[67] http://www.ofgem.gov.uk/Sustainability/Environment/EnergyEff/CU/Documents1/certfeb10.pdf, and http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/saving_energy/cert/cert.aspx visited on 11 May 2010.

LEB. Ofgem states that, as of June 2007, EDF had 57% market share, measured by the number of meters (not by the amount of energy supplied)[68]. The comparison will be based on the historical operator's standard tariff, as well as on its competing offer (Online Saver 6[69]). In addition, RWE nPower, will, with its standard rate, be the alternative supplier.

Table 13: EDF price offers in London (June 2010)

Contract type	Fixed costs incl. VAT (per year)	Variable costs incl. VAT
Standard EDF	**None**	**0.1875 £/kWh (213.07 €/MWh) for the first 900 kWh; 0.1143 £/kWh (129.88 €/MWh) for the balance**
EDF Online Saver 6	**68.47 £ or 77.37 €**	**0.0968 £/kWh or 109.38 €/MWh**

Table 14: RWE price offers in London (June 2010)

Contract type	Fixed costs incl. VAT (per year)	Variable costs incl. VAT
RWE nPower Standard	**None**	**0.15183 £/kWh (172.53 €/MWh) for the first 728 kWh; 0.12915 £/kWh (146.76 €/MWh) for the balance**

IV.5.3. Calculation of the breakdown of electricity cost

63. It should be pointed out that the ROCs, the equivalent of the "green certificates" in Belgium, are included in the supplier's price. The only taxes accounted for are therefore the CESP and CERT[70]. Concerning the value of the ROCs, it should be noted that the amount of the fine is accounted for.

Table 15: Electricity price breakdown in London (June 2010)

London	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Standard EDF	526.50	25.07	27.12	98.35	375.96	40.00% (*)
EDF Online	460.22	21.92	27.12	98.35	312.84	10.00% (*)
RWE	529.45	25.21	27.12	98.35	378.77	10.00% (*)
Weighted average	515.94	24.57	27.12	98.35	365.91	

(*) estimates[71].

68 http://www.ofgem.gov.uk/Markets/RetMkts/Compet/Documents1/DRMR%20March%202007doc%20v9%20-%20FINAL.pdf, p. 27, visited on 7 June 2010.

69 Today there is a seventh version of this offer, but it does not correspond to the period of comparison for this study.

70 It should be noted that for Eurostat, these two taxes are included in the cost of electricity supply.

71 EDF still held a 57% market share in 2007. We consider that it is still 50% today. HEPI also explained to us in an e-mail of 20 January 2010 that the offers used for the calculation of their index in London represented 60% of market share. The difference – 10% – therefore flows back to RWE.

V SUMMARY

Figure 1: Summary of the breakdown of the cost of 3,500 kWh electricity in euros for June 2010 in 5 European capitals (attempt to reproduce the HEPI results).

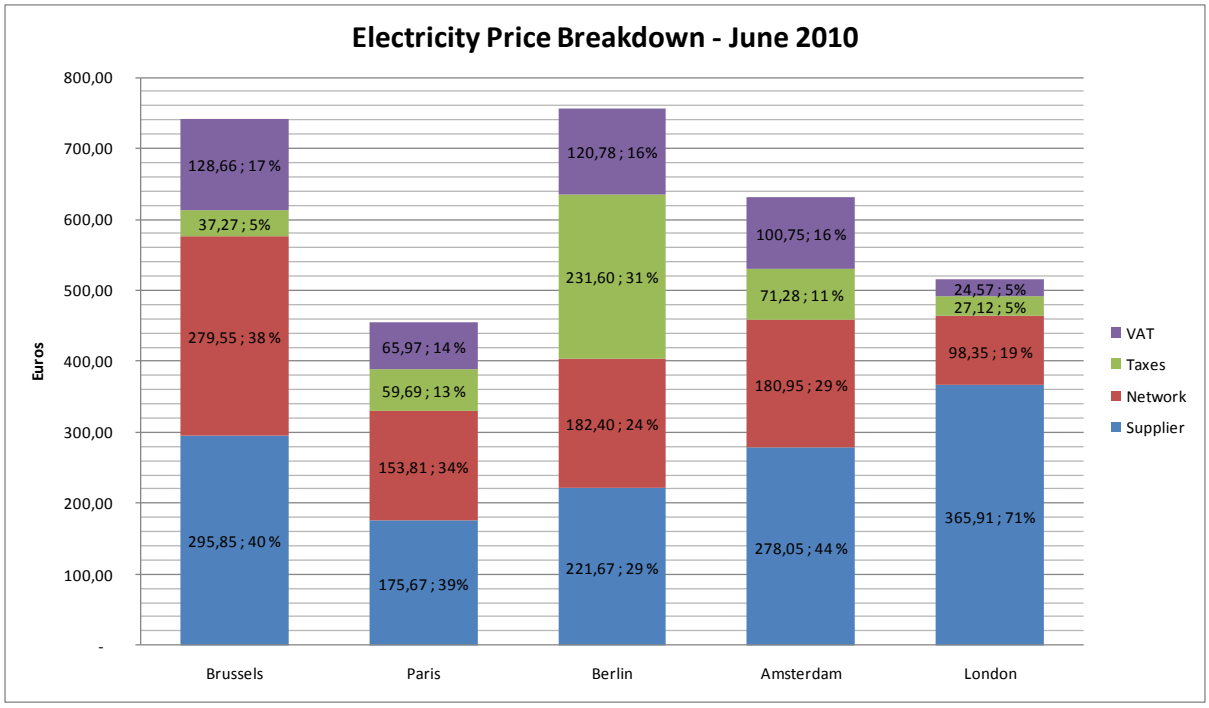


Table 16: Summary of the cost for a residential client consuming 3,500 kWh with a single rented meter, a power of 6kVA to 12kVA (or 3x25A or 1x80A) for June 2010, according to the methodology explained in this document (attempt to reproduce HEPI's results)

	Brussels	Paris	Berlin	Amsterdam	London
Supplier (€)	295.85	175.67	221.67	278.05	365.91
Network (€)	279.55	153.81	182.40	180.95	98.35
Taxes (€)	37.27	59.69	213.60	71.28	27.12
VAT (€)	128.66	65.97	120.78	100.75	24.57
Total (€)	741.33	455.15	756.44	631.02	515.94
Average per kWh (€)	0.2118	0.1300	0.2161	0.1803	0.1474
Index	100	61	102	85	70

Table 17: Detailed summary of the different components of the electricity cost (June 2010)

	Brussels (€)	Paris (€)	Berlin (€)	Amsterdam (€)	London (€)
Supplier	295.85	175.67	221.67	278.05	365.91
Energy and other costs	288.46	175.67	221.67	278.05	349.67
Green certificates (or similar)	7.39	N.A.	N.A.	N.A.	16.24
Network	279.55	153.81	182.40	180.95	98.35
Transport and distribution	271.37	N.A.	159.60	129.22	84.94
Transport	30.44	N.A.	N.A.	5.18	28.27
Distribution	240.93	N.A.	N.A.	124.04	56.68
Meter rental	8.18	N.A.	7.80	25.33	13.40
Meter reading	N.A.	16.80	3.27	N.A.	N.A.
Management (billing, etc.)	N.A.	8.04	11.73	N.A.	N.A.
Connection (variable)	N.A.	N.A.	N.A.	26.40	N.A.
Taxes	37.27	59.69	231.60	71.28	27.12
Local taxes	N.A.	34.79	83.65	N.A.	0.00
Exclusively social taxes	23.60	N.A.	0.00	N.A.	0.00
Environmental taxes	N.A.	N.A.	147.95	N.A.	27.12
VAT	128.66	65.97	120.78	100.75	24.57
Total	**741.33**	**455.15**	**756.44**	**631.02**	**515.94**

VI COMPARISON BETWEEN CHARLEROI – ANTWERP – BRUSSELS

64. The calculations are similar to those for Brussels. It should be noted, however, that the alternative supplier in Wallonia and in Flanders is Luminus, and not Lampiris. The market share estimates are based on a joint report from the four national regulators[72]. The distribution network operator is IMEA (Antwerp) for Flanders and IEH (Charleroi) for Wallonia. We did not choose Liege for Wallonia because Tecteo's tariffs are not representative. It should be noted in regards to Luminus's federal contribuion that we were neither able to distinguish between the different network operators, nor implement the various exonerations due to the fuel mix, since the different operators' offers are not sufficiently detailed.

65. The free kWh in Flanders should also be taken into account. Every household in Flanders receives 100 free kWh, to which is added 100 free kWh per person in the household. Therefore, a household of 4 people receives 500 kWh, at the tariff of 0.1783 € incl. VAT per free kWh or 178.34 € incl. VAT per free MWh. This discount is included in the distribution tariffs.

Table 18: Offers of different electricity suppliers in Antwerp and Charleroi (June 2010).

Contract type	Fixed annual costs incl. VAT (annual subscription)	Variable costs incl. VAT
EBL basic option (indexed)	**79.26 €/year**	**0.07885 €/kWh or 78.85 €/MWh**
EBL Energy +	**77.67 €/year**	**0.07728 €/kWh or 77.28 €/MWh**
Luminus Actief	**87.08 €/year**	**0.07879 €/kWh or 78.79 €/MWh**

66. The suppliers' offers are similar in Antwerp and Charleroi. The network cost and other contributions, however, are different (see following table).

[72] Development of the electricity and natural gas markets in Belgium in 2009.

Table 19: Table 14: Summary of the other components of the energy cost in Antwerp (IMEA) and Charleroi (IEH) (June 2010).

Item	Amount incl. VAT
Distribution	IEH: 78.60 €/MWh; IMEA: 70.00 €/MWh
Transport	IEH: 11.00 €/MWh; IMEA: 10.70 €/MWh
Metering	IEH: 17.63 €/year; IMEA: 6.63 €/MWh
Federal contribution	IEH - Electrabel: 5.47 €/MWh; IEH - Luminus 4.92 €/MWh; IMEA - Electrabel: 4.96 €/MWh; IMEA - Luminus: 4.92 €/MWh
Energy contribution	2.31 €/MWh
Road charges	IEH: 0.339 €/MWh; IMEA= 0.00 €/MWh
Connection charges	IEH: 0.75 €/MWh; IMEA= 0.00 €/MWh
Contribution renewable energy	IEH - Electrabel: 10.66 €/MWh; IEH - Luminus: 14.20 €/MWh; IMEA - Electrabel: 8.94 €/MWh; IMEA - Luminus: 11.80 €/MWh.
Free kWh	IMEA: 178.30 €/MWh, 500 free kWh for a 4-people-household

Table 20: Electricity price breakdown in Charleroi (June 2010)

Charleroi	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Basic EBL	752.80	130.65	23.97	273.74	324.43	30.00% (*)
EBL Energy +	745.70	129.42	23.97	273.74	318.56	10.00% (*)
Luminus Actief	757.96	131.55	22.40	273.74	330.27	17.00% (*)
Weighted average	753.09	130.70	23.50	273.74	325.14	

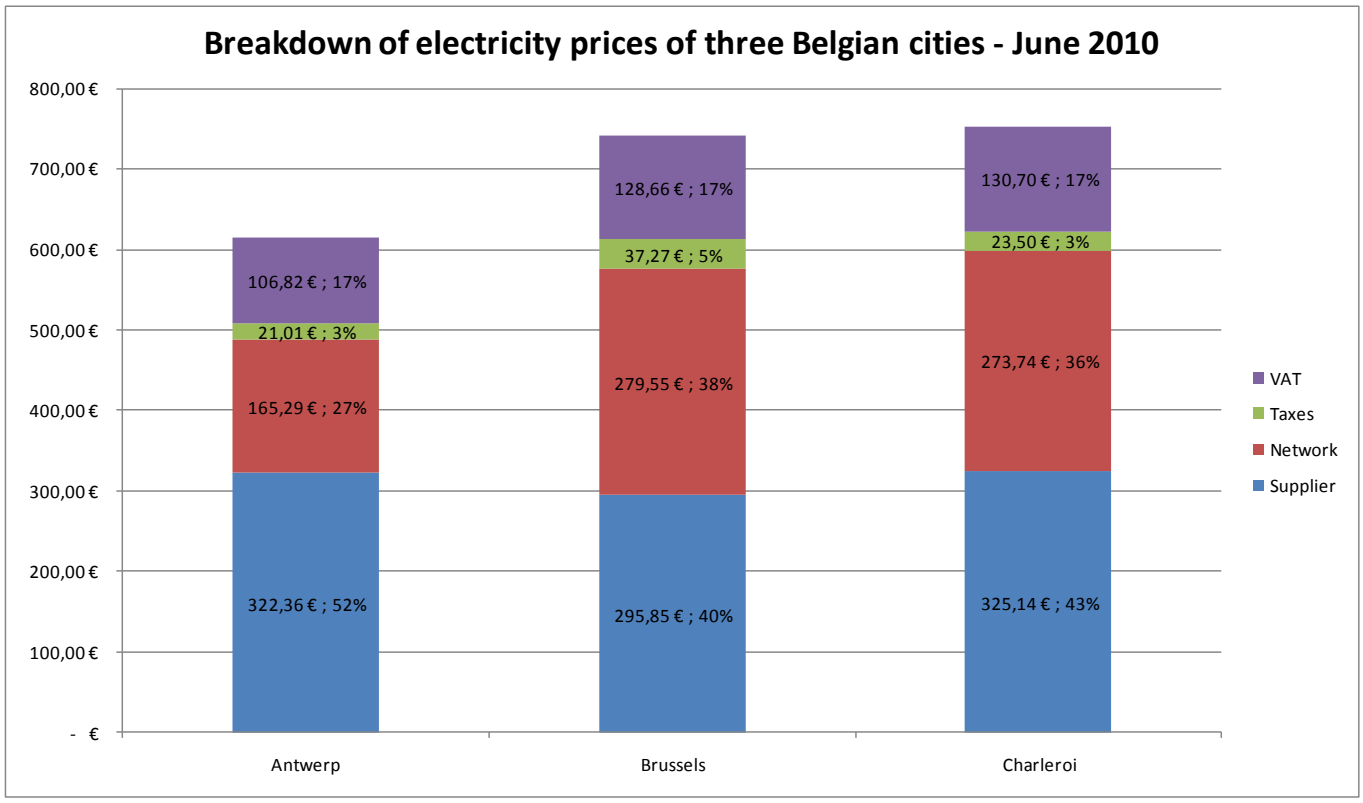
(*) estimates

Table 21: Electricity price breakdown in Antwerp (June 2010)

Antwerp	Total (€)	VAT (€)	Taxes (€)	Network (€)	Supplier (€)	Market share
Basic EBL	612.00	106.22	21.04	165.29	319.45	30.00% (*)
EBL Energy +	604.90	104.98	21.04	165.29	313.59	10.00% (*)
Luminus Actief	629.47	109.25	20.92	165.29	334.01	15.00% (*)
Weighted average	615.48	106.82	21.01	165.29	322.36	

(*) estimates

Figure 2: Summary of the cost breakdown of 3,500 kWh electricity for June 2010 in 3 Belgian cities.



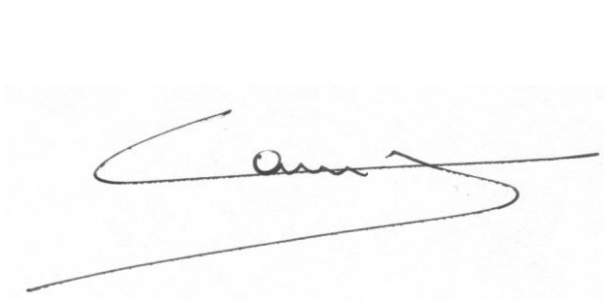
VII CONCLUSION

This study shows that, for a standard household, electricity costs much more in Brussels than in other European capitals, with the exception of Berlin. It should be noted that this conclusion is valid for the capitals, but not necessarily for the entire country. The distribution operator in Brussels, Sibelga, is more expensive than in other regions of the country. This situation also exists in foreign countries, for example in Berlin where the road or concession charges are much more expensive than in other parts of Germany.

We could add that Brussels is the most expensive city if we do not take into account the environmental policies which have a strong impact on the electricity cost in Berlin. There are several reasons for this. Above all, the network cost is more expensive than in other European capitals. Next, there is a lack of competition. The historical operator has more than a 90% market share, which is more than in any other capital except for Paris. And finally, the VAT rate is also higher than in the other considered capitals.

A third and final observation concerns the suppliers' revenues. Except for the London suppliers, we can state that the suppliers in Brussels generate the highest turnover per client.

For the Commission for Regulation of Electricity and Gas



Guido Camps
Director

François Possemiers
President of the Executive Committee

VIII LIST OF ACRONYMS

CERT	Carbon Emission Reduction Target (CERT)
CESP	Community Energy Saving Programme
CNIEG	Caisse Nationale des Industries Électriques et Gazières – National Gas and Electricity Industries Fund
CRE	Commission de régulation de l'énergie (French regulatory agency)
CSPE	Contribution au service public d'électricité – Contribution to the Public Electricity Service
CTA	Contribution tarifaire d'acheminement – Routing Contribution Tariff
DNO	Distribution Network Operator
DTe	The current Energiekamer, or Office of Energy Regulation, in the Netherlands
EEG	Erneuerbare-Energien-Gesetz (renewable energy tax law)
EPN	EDF Power Networks
ERDF	Electricité Réseau Distribution France (French distribution network operator)
HEPI	Household Energy Price Index
HH	Half hourly (meter)
LPN	London Power Network
MPAN	Meter Point Administration Number
NHH	Non half hourly (meter)
NMa	Nederlandse Mededingingsautoriteit (Dutch Competition Council)
PPP	Purchasing Power Parity
RO	Renewable Obligation
ROC	Renewable Obligation Certificate
TARTAM	Tarif réglementé transitoire d'ajustement de marché – Regulated Transitional Market Adjustment Tariff
TLE	Taxes locales sur l'électricité – Local Electricity Taxes
TNUoS	Transmission use of System
TSO	Transport System Operator
TURPE	Tarif d'utilisation des réseaux publics électriques – Public Electric Networks Utilisation Tariff