DETAILED TABLES

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Competition indicators in the electricity market

EU and Norway

Data 1999-2000

8

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ABBREVIATIONS

kWh	Kilowatt hour
GWh	Gigawatt hour (10^6 kWh)
MWh	Megawatt hour (10^9 kWh)
TWh	Terawatt hour (10^{12} kWh)
MW	Megawatt
KV	Kilovolt
MVA	Mega Volt Ampere (equivalent to MW)
NACE	Statistical Classification of Economic Activities in the EU.
UCTE	Union for the Co-ordination of Transmission of Electricity.
ETSO	European Transmission System Operators organisation.
EUR=€	Euro

SUMMARY

This publication provides basic quantitative information on the electricity markets of the European Union Member States and Norway during the years 1999 and 2000. It is particularly focused to show the data specifically collected under a project to monitor competition in the electricity market as a result of the ongoing liberalisation process.

The **Introduction** provides a general presentation of the project and the steps followed until the final production of this publication as well as a list of the national organisations that have supplied the released information to Eurostat.

The section on **Overall information and results** presents a summary of the main aggregated data available for each country through comparative tables and graphs. It provides basic economic information of the electricity sector, data on the progress of the liberalisation process as well as the main results for the three groups of activities in which the electricity market is divided: generation, transmission/distribution and supply.

The section on **National results** shows on a country basis the complete information provided by the national organisations co-operating with Eurostat.

Finally, the **Annexes** provide a copy of the questionnaire answered by the national organisations as well as data regarding prices quoted in power exchange markets and for final consumers.

INTRODUCTION

Directive 96/92/EC of 19 December 1996 concerning common rules for the internal market in electricity set out the first EU-level milestone towards the liberalisation of national electricity markets and the completion of a European internal electricity market. The United Kingdom and the Scandinavian countries had already started this process and had achieved significant results in terms of improving competition and reducing prices without harming the standard of service.

The provisions of Directive 96/92/EC fixed February 1999 as the deadline for Member States to bring into force the necessary national regulations to comply with this Directive. Derogation periods were granted only for Belgium (one year), Greece (two years) and Ireland (one year). In effect therefore, 1999 can be considered as the starting year in most of the Member States for the application of the principles set out in the Directive.

During 1999, Eurostat convened a Task Force entitled “Future of Energy Statistics” where the issue of liberalisation of the energy markets was discussed. The Task Force considered a number of issues related to the objectives of the liberalisation and the new market structure, namely:

- Effectiveness of competition in the competitive parts of the industry (production and supply).
- Transparency in the regulated parts of the industry.
- Creation of a single market across the Union.
- Effect of liberalisation on the electricity industry.
- Effects on the consumer.

The Task Force proposed a set of indicators to be collected addressing these issues. These indicators were of quantitative nature; qualitative information of administrative nature referring especially to the application of the Directive or the regulated part of the industry was not considered.

The list of variables drafted by the Task Force was presented to the Energy Statistics Committee meeting held in September 2000. All Member States recognised the importance of monitoring competition in the electricity market. The list of indicators was approved and a first data collection pilot exercise was launched for the provision of 1999 information.

Data provided for 1999 were compiled by Eurostat in the form of an internal document. This document was presented in the Energy Statistics Committee meeting held in October 2001 together with an analysis of the data availability and quality of the results as well as a proposal for a new list of indicators to be collected for 2000. This list was a subset of the original list: Eurostat could collect the rest from publicly available sources or alternative surveys carried out by other Eurostat departments, thus lowering the reporting burden under the present exercise.

The list of indicators for 2000 was agreed and is attached in **ANNEX I** including the definitions and explanations for each indicator. The list is divided in three groups of activities: generation, transmission and retailing, following the structure of the

electricity sector. The indicators cover the main aspects of each activity and are referred to as technical, monetary, and structural variables.

This publication is a compilation of the information provided by the Member States following the list of indicators for year 2000. It also provides the compatible data collected in the 1999 pilot exercise. Finally, it shows further information of the electricity sector as a whole or for some of its activities obtained from available public sources or other Eurostat surveys, as mentioned above.

This publication could not have been prepared without the co-operation and the data provided made by the national organisations dealing with electricity sectoral statistics and/or policies. Unless specifically stated elsewhere, data for each country have been provided by the following institutions:

BELGIUM	Ministère des Affaires Economiques – Administration de l'énergie
DENMARK	Danish Energy Regulatory Authority and Danish Energy Authority
GERMANY	Statistisches Bundesamt
GREECE	Regulatory Authority for Energy (RAE)
SPAIN	Ministerio de Economía
FRANCE	Ministère de l'Économie des Finances et de l'Industrie – Direction Générale de l'Énergie et des Matières Premières – Observatoire de l'Énergie
IRELAND	Commision for Electricity Regulation
ITALY	Ministero dell' Industria del Commercio e dell' Artigianato – Direzione Generale dell' Energia e delle Risorse Minerarie
LUXEMBOURG	Ministère de l'Économie - – Direction de l'Énergie
NETHERLANDS	Statistics Netherlands – Energy Unit
AUSTRIA	Elektrizitäts-Control GmbH
PORTUGAL	Entidade Reguladora do Sector Eléctrico (ERSE)
FINLAND	Statistics Finland – Environment and Energy
SWEDEN	Statistics Sweden – Energy Statistics
UNITED KINGDOM	Department of Trade and Industry (DTI)
NORWAY	Statistics Norway – Energy Statistics

Other data sources have been used to complete the information reported in this publication: UCTE, ETSO, Nordel, Eurelectric and some power exchange markets (Nord Pool, APX, OMEL, Electricity Pool of England & Wales, LPX and EEX).

This initiative has also benefited from the support of DG Transport and Energy (DG TREN) of the European Commission.

OVERALL INFORMATION AND RESULTS

1.- ECONOMIC INDICATORS OF THE ELECTRICITY SECTOR

Under the Structural Business Statistics (SBS) regulation a set of economic indicators by sector is collected. The sectors are defined according the NACE Rev.1 classification where the electricity industry is recorded under code E401 "Production and distribution of electricity".

These indicators provide an overall picture of the economic size of the electricity sector in the EU countries. However, in some Member States the figures are not available or are confidential.

Four indicators have been selected to be shown in this publication:

- Number of persons employed
- Turnover
- Value added at factor costs
- Gross operating surplus

Table 1: Economic indicators of the electricity sector

	Number of persons employed 2000 data	Turnover 2000 data (€ million)	Value added at factor costs 1999 data (€ million)	Gross operating surplus 1999 data (€ million)
Belgium	confidential	confidential	4 583.0	2 873.1
Denmark	11 060	not available	914.7	438.7
Germany	216 120	77 877.9	not available	not available
Greece	not available	not available	not available	not available
Spain	37 590	21 932.4	9 132.7	7 256.9
France	confidential	confidential	confidential	confidential
Ireland	confidential	confidential	confidential	confidential
Italy	104 610	26 715.2	11 721.4	7 246.5
Luxembourg	not available	470.9	154.7	101.9
Netherlands	not available	not available	not available	not available
Austria	27 379	8 243.7	3 939.7	2 160.7
Portugal	14 152	7 749.4	2 349.9	1 836.1
Finland	11 665	6 480.8	1835.3	1 259.0
Sweden	21 625	14 940.2	4 093.4	3 061.5
United Kingdom	not available	58 213.3	confidential	10 022.3

Source: Eurostat – SBS Statistics

2.- STATUS OF THE LIBERALISATION PROCESS

The liberalisation process of the electricity market is following different time schedules in each Member State. In some of them the electricity market was fully liberalised by the time Directive 96/92/EC came into force while in others derogation periods were granted.

The evolution of the electricity market opening is normally defined by the percentage that the consumption of the eligible consumers (those allow to choose electricity supplier) represents over the total electricity consumption. Member States decide the consumption threshold defining a consumer's eligibility at any time, although Directive 96/92/EC fixed certain minimum opening steps. The following table shows the degree of market opening in each Member State and Norway at the end of 2000, the corresponding annual consumption threshold defining eligibility and the date for full opening of the market.

Table 2: Degree of market opening

	Degree of market opening at the end of 2000	Eligible consumers' consumption threshold (GWh)	Date for full opening of the market
Belgium	35%	20	2007
Denmark	31%	1	2003
Germany	100%	any consumption	1999
Greece	*	*	none
Spain	45%	1	2003
France	30%	16	none
Ireland	30%	4	2005
Italy	45%	20	none
Luxembourg	40%	100	none
Netherlands	33%	20	2003
Austria	32%	20	2001
Portugal	30%	9	none
Finland	100%	any consumption	1997
Sweden	100%	any consumption	1998
United Kingdom	100%	any consumption	1998
Norway	100%	any consumption	

***** First opening took place in February 2001 for consumers of 100 GWh annual consumption. It represented 30% of the market.

Source: DG Transport and Energy (DG TREN)

3.- ELECTRICITY GENERATION

Normally, this is the first part of the electricity business that is opened to competition in order to move away from the past situation of historical monopolies. The openness of this area has been also boosted by the incentives to generation processes based on renewable energy sources and cogeneration. However, competition development in generation has to be subject to policies of security of supply in a context of growing electricity demand.

Table 3 shows the evolution of the total net generation during the period 1998-2000. In most of the countries there has been an increase in the electricity generation during the period considered that has been especially high in the case of Italy and Norway. In Greece, Spain and Ireland there were also significant rises. The highest reductions were recorded in Denmark in relative terms and in Sweden in absolute values.

Table 3: Total Net Generation (GWh)

	1998	1999	2000	Variation 1998-2000
Belgium	79 492	80 851	80 160	0.8%
Denmark	39 215	37 023	34 641	-11.7%
Germany	517 942	518 662	533 552	3.0%
Greece	42 757	46 021	49 863	16.6%
Spain	187 955	199 217	215 216	14.5%
France	487 452	500 306	516 673	6.0%
Ireland	20 003	20 889	22 684	13.4%
Italy	246 264	252 109	323 437	31.3%
Luxembourg	1 250	1 006	1 147	-8.2%
Netherlands	87 394	82 895	85 951	-1.7%
Austria	55 896	57 747	60 300	7.9%
Portugal	37 477	41 739	37 537	0.2%
Finland	67 325	66 655	67 292	0.0%
Sweden	153 788	150 770	142 041	-7.6%
United Kingdom	344 329	351 670	358 639	4.2%
Norway	116 051	121 737	141 846	22.2%

Source: Eurostat

3.1.- Market structure

The structure of the electricity generation market has been monitored by requesting two groups of figures: number of generating companies and market shares.

Regarding the number of generating companies, two figures have been requested: generating companies representing at least 95% of total generation and those producing individually at least 5% of total generation. The results are presented in Table 4.

Table 4: Number of generating companies

	Companies representing at least 95% of total generation		Companies producing at least 5% of total generation	
	1999	2000	1999	2000
Belgium	2	2	1	2
Denmark	Approx. 559	Approx. 826	2	3
Germany	Approx. 70	Approx. 70	4	4
Greece	1	1	1	1
Spain	4	4+	4	4
France	2	3	1	1
Ireland	1	1	1	1
Italy	9	62	2	4
Luxembourg	not applicable	not applicable	not applicable	not applicable
Netherlands	83	11	4	6
Austria	55	54	6	5
Portugal	3+	3+	3	3
Finland	38	38	4	4
Sweden	38	7	3	3
United Kingdom	18	32+	6	8
Norway	5+	not available	5	not available

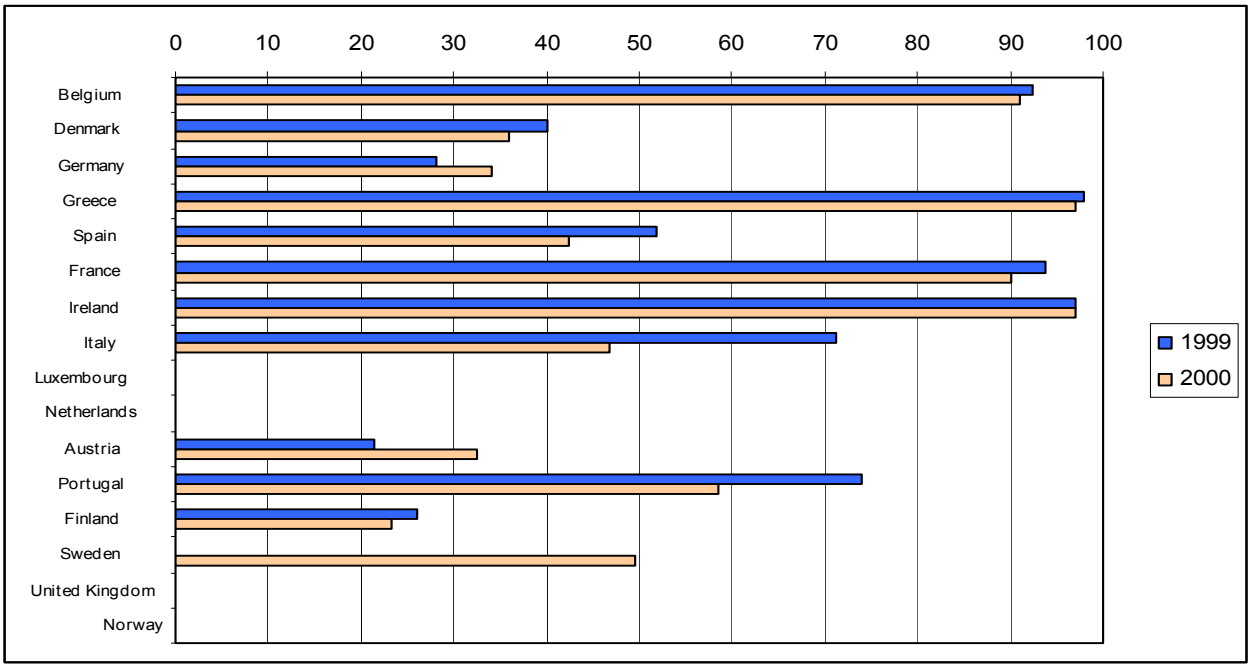
Market shares information has been obtained in terms of total generation and installed capacity for those generating companies with at least 5% of the national electricity generation/capacity. Some countries have had confidentiality problems to provide company names and/or individual shares and only aggregated shares are available. Detailed figures are provided for each country in the **NATIONAL RESULTS** section.

Table 5 presents the aggregated share of the companies producing at least 5% of total net generation during the year and their corresponding share in the installed capacity. In other words, Table 5 shows the aggregated market share of the companies included in the right-hand side of Table 4. In addition, Figure 1 provides the share of the dominant generating company measures as a percentage of total generation.

Table 5: Aggregated share of companies producing at least 5% of total generation

	Generation (%)		Installed capacity (%)	
	1999	2000	1999	2000
Belgium	92.3	97.6	86.4	95.9
Denmark	74	76	73	78
Germany	68.1	79	62.2	71
Greece	98	97	98	97
Spain	99.3	82.3	99.3	87
France	93.8	90.2	90.1	86.9
Ireland	97	97	95	97
Italy	76.2	68	81	72.4
Luxembourg	not applicable	not applicable	not applicable	not applicable
Netherlands	not available	79.1	not available	82.2
Austria	54.3	58.9	55	58.3
Portugal	85.5	84.1	83.4	81.6
Finland	60	58.9	51	50.2
Sweden	65.2	84.2	57.4	89.9
United Kingdom	71.5	72.9	61.6	69.3
Norway	50.2	not available	54.2	not available

Figure 1: Market share of dominant generating company



3.2.- Installed capacity and maximum demand

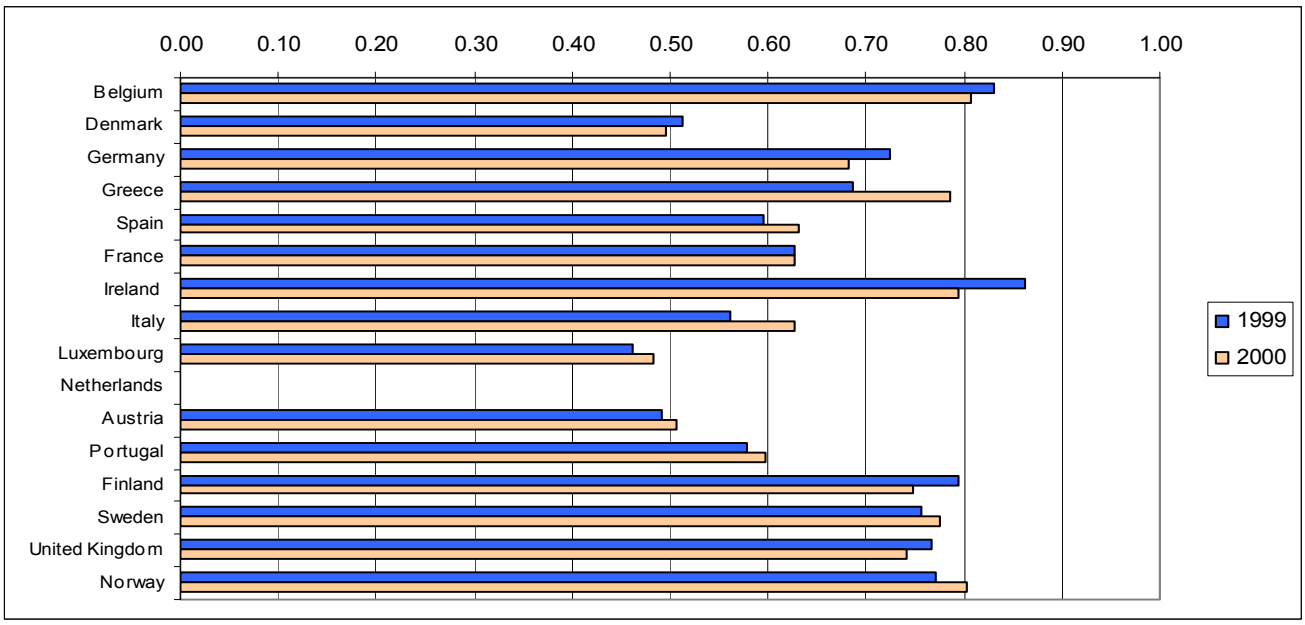
Each country has provided a breakdown of the net installed capacity by type of plant at the end of the year and the maximum electricity demand (peak load) recorded during the year. The analysis of these data over time can tell about the generators' response to growth in demand and the kind of technology chosen for further investments in capacity under competitive circumstances.

Installed capacity breakdowns by technology are included in the **NATIONAL RESULTS** section. Total installed capacity figures together with maximum demands for 1999 and 2000 are presented in Table 6. Based on the data of this table, Figure 2 presents the results of calculating the ratio maximum demand/installed capacity.

Table 6: Installed capacity and maximum demand

	Total installed capacity (MW)		Maximum demand (MW)	
	1999	2000	1999	2000
Belgium	15 569	15 672	12 941	12 653
Denmark	12 718	12 655	6 520	6 267
Germany	112 109	118 347	81 180	80 852
Greece	10 733	10 853	7 366	8 531
Spain	52 422	52 627	31 247	33 236
France	114 591	115 404	71 900	72 400
Ireland	4 358	4 842	3 757	3 844
Italy	76 231	78 085	42 731	49 019
Luxembourg	1 234	1226	569	593
Netherlands	20 675	20 635	not available	not available
Austria	18 023	18 238	8 850	9 218
Portugal	10 570	10 710	6 122	6 403
Finland	16 458	16 576	13 080	12 400
Sweden	34 080	33 565	25 800	26 000
United Kingdom	75 456	78 891	57 849	58 452
Norway	28 133	28 162	21 712	22 603

Figure 2: Ratio maximum demand/net installed capacity



3.3.- Power exchange markets

In 2000 several electricity spot or pool markets existed or started operations. They are the following:

- Nord Pool. This is a multi-national market since Denmark, Finland, Sweden and Norway are part of it. Established in 1993, Nord Pool is one of the most developed power exchange markets in Europe: it comprises not only a spot market but also financial trading (futures, forwards and options) and a clearing service of bilateral contracts. In 2000 the electricity volume traded in the spot market was 96.9 TWh.

- APX (Amsterdam Power Exchange). This is a daily spot market operational since May 1999 where distributors, producers, traders, brokers and industrial end-users buy and sell electricity on a day-ahead basis. In 2000 the electricity volume traded in this market was about 4.6 TWh

- OMEL (Operadora del Mercado Español de Electricidad). The Spanish pool power market started to work in 1998. Most of the electricity produced in Spain is traded via OMEL. In 2000, the electricity volume traded reached a total value of 192.9 TWh of which 171.6 TWh corresponded to the spot daily market.

- The Electricity Pool of England & Wales. Was created on 1990 as a contractual arrangement entered into by generators and suppliers to provide a wholesale market mechanism for trading electricity. With the introduction of the New Electricity Trading Arrangements (NETA) on 27 March 2001, the Electricity Pool of England & Wales ceased its activities.

- UK PX. The UK Power Exchange started operations from May 2000. It provides trading services in a range of spot and derivative contracts for electricity as well as clearing of bilateral contracts.

- LPX. Leipzig Power Exchange started to operate in June 2000. It is an spot market for hourly and block contracts with delivery rendered the next day. During 2000 the volume of electricity traded was 2.26 TWh.

- EEX. The European Energy Exchange, based in Germany, was launched on 8 August 2000 with the aim of establishing a central market place for electrical power in exchange in central Europe. EEX started day-ahead trading with standardised products on the spot market. During year 2000 the volume of electricity traded was about 1.9 TWh.

ANNEX II includes tables showing the monthly prices quoted in some of these power exchange markets during 2000.

Other power exchange markets began operations during 2001. This the case of IIPEX (Independent Irish Power Exchange) in Ireland, AAPEX (Alpen Adria Power Exchange) in Austria and POWERNEXT in France.

4.- ELECTRICITY TRANSMISSION AND DISTRIBUTION

This part refers to the transportation of electricity through the high voltage (transmission) and medium and low voltage (distribution) networks. In this area, most of the countries have opted for a regulated Third Party Access to the network. These activities are considered as natural monopolies either at national or regional level. Therefore, they are subject to strict regulation in order to ensure non-discriminatory access to all interested parties.

Also, the inter-connection of national transmission systems is a key factor in facilitating electricity transit and exchanges with the objective of creating a single European electricity market.

The implementation of transmission and distribution tariff systems is another need resulting from the splitting of activities imposed by liberalisation.

4.1.- Imports and exports

The physical cross-border exchanges of electricity are presented in Table 7 separately for imports and exports. In the **NATIONAL RESULTS** section the figures for each country are split by country of origin and destination.

Table 7: Imports and exports of electricity (GWh)

GWh	1999		2000		Variation %	
	Import	Exports	Imports	Exports	Imports	Exports
Belgium	9 059	8 207	11 645	7 319	28.5%	-10.8%
Denmark	5 188	6 779	8 417	7 752	62.2%	14.4%
Germany	39 304	38 018	45 031	41 877	14.6%	10.2%
Greece	1 813	1 652	1 729	1 740	-4.6%	5.3%
Spain	11 951	6 234	12 265	7 827	2.6%	25.6%
France	4 965	68 108	3 695	73 174	-25.6%	7.4%
Ireland	290	49	168	72	-42.1%	46.9%
Italy	42 537	528	44 831	484	5.4%	-8.3%
Luxembourg	6 175	657	6 458	735	4.6%	11.9%
Netherlands	22 408	3 749	21 881	4 031	-2.4%	7.5%
Austria	11 608	13 418	13 920	15 216	19.9%	13.4%
Portugal	3 513	4 453	4 698	3 767	33.7%	-15.4%
Finland	11 356	232	12 206	326	7.5%	40.5%
Sweden	8 500	16 100	18 308	13 630	115.4%	-15.3%
United Kingdom	14 507	263	14 308	134	-1.4%	-49.0%
Norway	6 857	8 776	1 474	20 529	-78.5%	133.9%

4.2.- Inter-connection capacity and load factor

This variable seeks to collect information on the inter-connectors capacities in the national transmission systems and their load factor, that is, their actual usage. In some cases, data is available at the inter-connector level while in others it is available only at a national inter-connection level. Load factor figures were available only in a few countries. Data published by ETSO (European Transmission System Operators association) have been used for some countries.

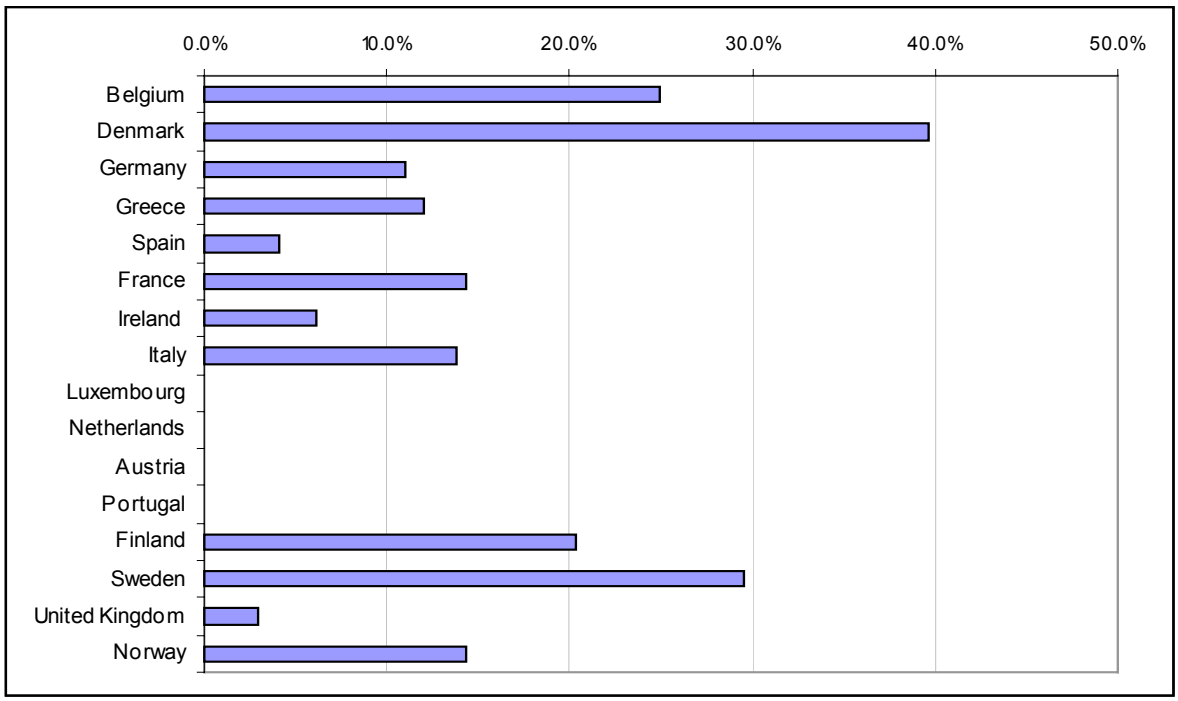
Inter-connection capacity information can be different in summer and winter and also for importing or exporting electricity. Table 8 presents the aggregated national net transfer capacities for imports and exports (if reported separately). If both winter and summer capacities have been reported, winter capacities are included in this table. In the **NATIONAL RESULTS** section the detailed available information at national level is shown.

Table 8: National net transfer capacities (MW)

	Net transfer capacity (MW)	
	Import	Export
Belgium	3 900	4 300
Denmark	5 010	5 490
Germany	13 080	12 820
Greece	1 300	1 500
Spain	2 125	2 200
France	16 550	
Ireland	300	
Italy	10 800	-
Luxembourg	-	-
Netherlands	-	-
Austria	-	-
Portugal	-	-
Finland	3 360	1 690
Sweden	9 915	9 505
United Kingdom	2 300	
Norway	4 025	4 345

Based on the data of this table and the installed capacity figures reported for 2000 in Table 6, Figure 3 presents the results of calculating the ratio net transfer import capacity versus installed capacity.

Figure 3: Ratio net transfer import capacity/net installed capacity



4.3.- Transmission and distribution tariffs

Transmission and distribution tariffs have not been specifically covered in the 2000 data collection exercise. The variety of these tariffs is normally very wide since they can depend on voltage levels, time periods, customer production or consumption volumes or geographical areas within the country.

However, some information can be found in a benchmarking study prepared for the Directorate-General for Energy and Transport (DG-TREN) of the European Commission. This study has been performed by *Universidad Pontificia de Comillas (Madrid)* under the title "Benchmark of Electricity Transmission Tariffs". The final report, published in February 2002, can be downloaded from the DG-TREN web page (www.europa.eu.int/comm/dgs/energy_transport/).

This study is mainly concentrated on the transmission charges and the description of their components. Numerical values of the annual transmission charges for some case examples have been provided for each country according to the existing national regulations. In addition, the same consumer typology has been used to present numerical results for distribution charges in some countries.

5.- ELECTRICITY SUPPLY

This is the part of the electricity market where the liberalisation process is most visible for final consumers for two main reasons:

- The possibility customers have to choose their electricity supplier and, therefore, to switch from one supplier to another.
- The impact on electricity prices of opening the market to competition.

On the other hand, the breakup of activities resulting from the liberalisation process is resulting in the creation of companies specifically devoted to selling electricity to final consumers. Because liberalisation has not advanced at the same pace everywhere one can find countries where electricity suppliers are at the same time distributors (i.e. they transport electricity over the low and medium voltage networks) and retailers (i.e. they sell electricity to final consumers) while in other countries there are traders selling electricity to final consumers by using the network of "pure" distribution companies. Also, it is possible to find generators who sell electricity directly to final consumers.

This section on electricity supply attempts to analyse how competition works in the market where final consumers buy the electricity they need. Final electricity consumption in the country is therefore a key figure in this section. Table 9 shows the evolution of final electricity consumption during the period 1998-2000. All countries presented a positive growth rate during the period, and it was specially high in Ireland, Spain and Portugal.

Table 9: Final electricity consumption (GWh)

	1998	1999	2000	Variation 1998-2000
Belgium	73 957	74 505	77 539	4.8%
Denmark	32 101	32 229	32 462	1.1%
Germany	466 476	467 483	482 603	3.5%
Greece	39 315	40 879	43 151	9.8%
Spain	165 969	177 252	188 459	13.6%
France	367 204	374 677	385 111	4.9%
Ireland	17 668	18 802	20 313	15.0%
Italy	254 747	261 030	272 547	7.0%
Luxembourg	5 297	4 056	5 716	7.9%
Netherlands	92 744	94 722	97 938	5.6%
Austria	48 767	50 502	51 884	6.4%
Portugal	33 845	36 120	38 373	13.4%
Finland	72 806	74 200	75 446	3.6%
Sweden	123 525	126 512	128 347	3.9%
United Kingdom	315 644	322 770	328 919	4.2%
Norway	109 057	109 267	109 678	0.6%

Source: Eurostat

5.1.- Market structure

The market structure of the electricity supply has been monitored by requesting two groups of figures: number of suppliers and market shares. Electricity suppliers are defined in a broad sense, that is, a company selling to final consumers a part of the final electricity consumption of the country.

Regarding the number of suppliers, two figures have been requested: suppliers selling at least 5% of total electricity consumed by final customers, and total number of suppliers. The results are presented in Table 10.

Table 10: Number of electricity suppliers

	Total number of suppliers		Suppliers selling at least 5% of total electricity consumed	
	1999	2000	1999	2000
Belgium	not available	34	not available	3
Denmark	95	83	3	3
Germany	about 1200	about 1200	3	3
Greece	1	1	1	1
Spain	not available	150	3	3
France	178	174+	1	1
Ireland	not available	6	1	1
Italy	not available	194	not available	2
Luxembourg	2	2	2	2
Netherlands	not available	33	7	7
Austria	175	170	6	7
Portugal	not available	13	not available	1
Finland	not available	100+	not available	3
Sweden	165	165	3	3
United Kingdom	29	22	9	8
Norway	179	155	3	4

Market share information has been obtained for those suppliers selling at least 5% of the total electricity consumed. Some countries have had confidentiality problems providing company names and/or individual shares and only aggregated shares are available. Detailed figures are provided for each country in the **NATIONAL RESULTS** section.

Table 11 presents the aggregated share of those suppliers selling at least 5% of the total electricity consumed. In other words, Table 11 shows the aggregated market share of the companies included in the right-hand side of Table 10. In addition, it shows the share of the dominant supplier, if available.

Table 11: Market shares of suppliers

	Aggregated share of supplier with at least 5%		Dominant supplier	
	1999	2000	1999	2000
Belgium	not available	52.5		39.8
Denmark	31.5	37.5	17.7	16.7
Germany	not available	50		
Greece	100	100	100	100
Spain	96.5	94	46.1	40
France	not available	not available		
Ireland	confidential	confidential		
Italy	not available	72		65
Luxembourg	100	100	64	63
Netherlands	71.4	74		
Austria	53.6	67.3	17.8	
Portugal	not available	99.5		99.5
Finland	not available	27		11
Sweden	52.1	47.0		28.1
United Kingdom	76.1*	84.7		
Norway	39.5	45.9		

*In 1999, aggregated market share of the first top 8 suppliers instead of the first 9 top suppliers that had individual market shares of at least 5%.

5.2.- Prices to final customers

The main reference in this regard is the half-yearly statistics collected by Eurostat based on the principles of Directive 90/377/EEC. Prices recorded in January and July of 1999 and 2000, both for domestic and industrial consumers, are shown in **ANNEX III**.

5.3.- Customer switching and renegotiating

One of the objectives of the liberalisation process is to allow consumers to switch from one supplier to another and, as a consequence, introduce or reinforce competition between suppliers. Another way of benefiting from this process for electricity consumers is by renegotiating the contractual conditions they have with their suppliers.

In principle, eligible customers are those with the right to choose an electricity supplier. They are therefore the only ones who can switch supplier or renegotiate their contracts. A customer's eligibility is normally determined by an annual consumption

threshold and varies according to the level of market liberalisation in the country as presented in Table 2. In countries which are fully liberalised all customers are eligible.

In general, results provided for this point are limited. Table 12 shows the results available for customer switching separately for industrial and domestic consumers. The first figure represents the percentage of eligible consumers who have changed supplier in 2000 while the second represents their corresponding volume of consumption.

Table 12: Customer switching supplier

	Industrial customers		Domestic customers	
	%	Volume (GWh)	%	Volume (GWh)
Belgium	2.6	800		
Denmark	91	3 117		
Germany			2.1	
Greece				
Spain				
France	6	5 400		
Ireland		3		
Italy				
Luxembourg				
Netherlands				
Austria				
Portugal	4.2	538		
Finland	about 10	about 34 000	4	about 2 000
Sweden				
United Kingdom				
Norway	7.1		11.2	

Very few results are available regarding contract renegotiation. . Only Belgium, Germany and Finland have provided some estimates. They are shown in the **NATIONAL RESULTS** section.

5.4.- Electricity volumes traded

The magnitude and importance of the electricity volumes traded can be evaluated from the volumes negotiated in the power exchange markets. In this regard, *Statistics Finland* has proposed the use of two indicators:

1.- The volume of contracts traded in electricity exchanges on daily physical markets in relation to electricity consumption in the market area. This indicator shows how far the market relies on and has confidence in the exchanges.

2.- The volume of contracts traded on the financial derivatives market and clearing of contracts traded in the bilateral market in relation to electricity consumption in the market area. This indicator shows the development and share of electricity trade compared to the size of physical market.

Table 13 shows the results of appling these two indicators to the example of Nord Pool for years 1999 and 2000.

Table 13: Indicators of electricity volumes traded in Nord Pool

	1999	2000
Volume of contracts traded in the daily physical market (A)	75 TWh	97 TWh
Aggregated electricity consumption for the market area (B)	351 TWh	381 TWh
Indicator 1 [(A/B)x100]	**21.4%**	**25.4%**
Volume of contracts traded in the financial derivatives market (C)	216 TWh	359 TWh
Clearing of contracts in the bilateral market (D)	684 TWh	1180 TWh
Aggregated electricity consumption for the market area (B)	351 TWh	381 TWh
Indicator 1 [(C+D/B)x100]	**256.4%**	**403.9%**

Source: Nord Pool

In order to calculate these indicators it is necessary that a power exchange market exists not only for physical daily trade but also financial derivatives and providing contract clearing services. Using the volume figures of the existing markets in 2000 (Point 3.3) and the electricity consumption figures shown in Table 9, we can calulate at least Indicator 1 for some of those markets:

- APX (Netherlands): (4.6 TWh/97.9 TWh)= **4.7%**
- OMEL (Spain):(171.6 TWh/188.4 TWh)= **91.1%**
- LPX (Germany): (2.26 TWh/482.6 TWh)= **0.5%**
- EEX (Germany):(1.9 TWh/482.6 TWh)= **0.4%**

NATIONAL RESULTS

BELGIUM

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**2**	**2**
Number of generating companies producing at least 5% of total net generation	**1**	**2**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Company A	92.3	91.1	86.4	87.5
Company B	4.3	6.5	8.2	8.4
Aggregated share	**96.6**	**97.6**	**94.6**	**95.9**
Other generators	3.4	2.4	5.4	4.1

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	8 327.2	8 427.9
Nuclear	5 713.0	5 713.0
Hydro	1 404.0	1 404.3
Wind	9.3	9.9
Geothermal		
Solar		
Other	115.5	117.3
TOTAL	**15 569.0**	**15 672.4**

	1999	2000
Maximum load (MW)	**12 941**	**12 653**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**about 300**	**537.9**
Amount of capacity decommissioned (MW)	**about 500**	**434.5**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Netherlands	3 086.1	5 248.8	3 133.1	5 150.9
Luxembourg	0	1 946.1	0	1 966.8
France	5 973.1	1 012.4	8 511.6	201.7
TOTAL	**9 059.2**	**8 207.3**	**11 644.7**	**7 319.4**

2.2 Inter-connectors transmission capacity and load factor

The following table shows the Net Transfer Capacity in 2000, on each border of Belgium, with an estimation of the load factor.

Country	Voltage of the interconnectors (kV)	Import into Belgium				Export from Belgium			
		Winter		Summer		Winter		Summer	
		Net transfer capacity (MW)	Load factor (%)	Net transfer capacity (MW)	Load factor (%)	Net transfer capacity (MW)	Load factor (%)	Net transfer capacity (MW)	Load factor (%)
France	380 and 220 kV	1.800	58,9	1.450	88,0	2.500	0,6	1.500	0,2
Netherlands	380 and 150 kV	1.700	23,0	1.700	15,3	1.400	49,7	2.200	38,9
Luxembourg	220 and 150 kV	400	0,0	400	0,0	400	46,5	400	45,6

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers		**3**
Total number of electricity suppliers to final customers		**34**

No data available for 1999.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Supplier A		39.8
Supplier B		6.4
Supplier C		6.3
Aggregated share		**52.5**
Other suppliers		47.5

No data available for 1999.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**2.6**	**800**	**-**	**-**
Customer renegotiating	**33**	**10 100**	**-**	**-**

The percentages shown for the industrial consumers have been calculated taking into account the eligible consumers.

Regarding domestic consumers, in 2000 they were not considered eligible in Belgium. Therefore, this indicator is not applicable to them.

DENMARK

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**approx. 559**	**approx. 826**
Number of generating companies producing at least 5% of total net generation	**2**	**3**

Beyond the number of generating companies representing at least 95% of total net generation, more than 4000 companies owns wind power units. Wind power represents more than 12% of the total net electricity generation in 2000.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Energy E2	34	36	33	37
Elsam	40	32	40	38
EON		8		3
Aggregated share	**74**	**76**	**73**	**78**
Other generators	26	24	27	22

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	10 935	10 227
Nuclear		
Hydro	11	10
Wind	1 771	2 418
Geothermal		
Solar		
Other	1	
TOTAL	**12 718**	**12 655**

	1999	2000
Maximum load (MW)	**6 520**	**6 267**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**390**	**54**
Amount of capacity decommissioned (MW)	**636**	**0**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Germany	401.4	4 555.9	396	5 993
Sweden	4 254.6	1 586.2	3 390	1 616
Norway	531.8	636.4	4 631	143
TOTAL	**5 187.8**	**6 778.5**	**8 417**	**7 752**

2.2 Inter-connectors transmission capacity and load factor

INTERCONNECTORS	Voltage (kV)	Transmission Capacity (MW) Export/Import	Load factor (%)
Denmark (east) - Sweden	2 x 400 (AC)	1900	not available
Denmark (east) - Sweden	2 x 132 (AC)		not available
Denmark (east) - Germany	400 (DC)	600	not available
At present, there are no interconnectors between East and West Denmark			
Denmark (west) - Germany	2 x 400 (AC)	1200/800	52,2
Denmark (west) - Germany	2 x 220 (AC)		
Denmark (west) - Germany	1 x 150 (AC)	150	not available
Denmark (west) - Germany	1 x 60 (AC)	approx. 30	not available
Denmark (west) - Sweden	250/285 (DC)	610/580	67,3
Denmark (west) - Norway	250/350 (DC)	1000/950	57,6

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**3**	**3**
Total number of electricity suppliers to final customers	**95**	**83**

Total number of suppliers in 2000 comprises: 50 supply-commited companies, 11 companies with balance of power responsibility with respect to consumption and 22 trading companies acting as intermediaries, primarily on behalf of the supply-committed companies, without balance of power responsibility.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
NESA	17.7	16.7
Københavns Energi (KE)	8.2	12.4
SEAS	5.6	8.4
Aggregated share	**31.5**	**37.5**
Other suppliers	68.5	62.5

Source: Association of Danish Energy Companies, except for KE market share for 2000, which has been derived from KE reported sales for that year (2 687 GWh).

In 2000, since no figures exist on actual sales, the turnover has been constructed by deducting the supply from supply-committed companies from the total flow registered by distributors and further deducting the share of priority production on a firm-to-firm basis. Calculations are based on a sub-sample of 31 out of 50 supply-committed companies where Københavns Energi (KE Kunde A/S) was not included.

Priority production from wind power units and CHP production facilities accounts for approximately 1/3 of electricity production. Consumers are obliged to demand priority production that is paid a premium relative to the market price.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**91**	**3 117**	**-**	**-**
Customer renegotiating	**-**	**-**	**-**	**-**

Source: Association of Danish Energy Companies.

The percentages shown for the industrial consumers have been calculated taking into account the eligible consumers. According to the Danish Electricity Act consumers with annual consumption of >10 GWh were eligible to freely choose their supplier on 1 April 2000. Total number of eligible consumers were 211 representing a volume of 5 095 GWh (including priority production). Out of the total, 192 eligible consumers switched electricity supplier. Eligible consumers may switch several times during the year inflating the calculated share.

In 2000, this indicator is not applicable to Danish domestic consumers.

GERMANY

All data refer to electricity supply companies in the Federal Republic of Germany, excluding plants belonging to *Deutsche Bahn AG* (Public railway company).

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**about 70**	**about 70**
Number of generating companies producing at least 5% of total net generation	**4**	**4**

There are altogether around 450 companies which generate power for general supply (excluding private operators of wind turbine generators and hydro power plants).

1.2 Percentages of total generation and capacity by generating company

Varying corporate configurations make it difficult to calculate market shares. Annual statistics for 1999 and 2000 available from the VDEW (German Electricity Association) are only approximate. They may differ from any figures supplied by the companies themselves.

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
RWE	28.1	34	23.4	26
e.on	24.4	27	24.4	28
VEAG	10.2	12	9.3	10
EnBW	5.4	6	5.1	7
Aggregated share	**68.1**	**79**	**62.2**	**71**
Other generators	31.9	21	37.8	29

1999 figures do not consolidate subsidiaries
2000 figures include consolidated subsidiaries

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	79 371	80 794
Nuclear	22 329	22 396
Hydro	8 853	8 982
Wind	1 555	6 095
Geothermal		
Solar		
Other	1	80
TOTAL	**112 109**	**118 347**

	1999	2000
Maximum load (MW)	**81 180**	**80 852**

Source: Eurostat

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**Approx. 3 000**	**-**
Amount of capacity decommissioned (MW)	**Approx. 1 700**	**-**

Data for 1999 refer only to power plants rated upwards of 100 MW. No data available for 2000.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Austria	5 881	4 460	5 925	7 293
Switzerland	5 863	8 685	5 433	10 220
France	13 771	222	15 351	407
Luxembourg	657	4 229	738	4 400
Netherlands	665	17 158	898	16 684
Denmark	5 119	598	6 413	545
Sweden	1 287	100	654	92
Poland	368	1 954	688	2 005
Czech Republic	5 693	612	8 931	231
TOTAL	**39 304**	**38 018**	**45 031**	**41 877**

Source of 1999 figures: UCTE

2.2 Inter-connectors transmission capacity and load factor

The following table presents indicative values for Net Transfer Capacities from/to Germany. They correspond to the Winter 2000-2001, working days, peak hours (Non binding values). Only the values provided by Germany are shown.

From:	To:	MW
Germany	Austria	1 650
	Netherlands	2 800
	Switzerland	2 000
	France	2 250
	Sweden	370
	Denmark (East)	550
	Centrel	1 200
Switzerland + Germany	Austria	2 000
Austria	Germany	1 150
	Germany + Switzerland	3 000

Centrel	Germany	2520
Denmark (West)	Germany	1 200
Denmark (East)	Germany	550
France	Germany	2 850
Netherlands	Germany	1 350
Sweden	Germany	460

Source: ETSO

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**3**	**3**
Total number of electricity suppliers to final customers	**about 1 200**	**about 1 200**

In both years, 1 100 to 1 200 companies were estimated to be selling electricity to final customers. Around 900 of these run their own distribution network.

In 2000, three companies (RWE, e.on and EnBW) were each responsible for over 5% of sales of electricity to final customers (direct sales). This includes majority holdings in distribution companies (company groups). If consolidated subsidiaries are excluded, only one company lies above the 5% threshold. The total market share of these three companies is around 50%.

In 1999, if consolidated subsidiaries are excluded, only one company held a market share amounting to more than 5% of electricity sales to end-consumers. Two other companies sell electricity mainly via re-distributors and therefore held market shares below 5% without consolidating subsidiaries.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
RWE		
e.on		
EnBW		
Aggregated share		**50**
Other suppliers		50

Individual market shares are confidential. No data available for 1999.

3.3 Prices to final customers

*See **ANNEX III**.*

According to Directive 90/377/EEC, the electricity prices paid by typical final customers (households and industry) in various regions/cities have to be reported. Since liberalisation came into force in Germany (100% open market) monopolies have been abolished and customers may choose their own suppliers. In principle, therefore, prices no longer differ from one region to another. Hitherto, VDEW has sent Eurostat the prices charged by companies established in the regions in question. But these reports do not reflect current prices either, since the companies report the prices in their standard contracts/general tariffs and have in some cases indicated that in the meantime non-standard contracts have been concluded with many customers, along with individual contracts with industrial customers, so that average prices may be much lower than those reported.

3.4 Final customers switching supplier or renegotiating contracts

There is currently no information from official sources or electricity producers' associations in Germany on numbers of customers switching suppliers. Representative market surveys conducted by the VDEW (VDEW customer-focus surveys) provide some indication, however. The latest market studies from the autumn of 2000 gave the following switchover rates for Germany (1998 - 2000):

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**-**	**-**	**2.1**	**-**
Customer renegotiating	**-**	**-**	**26.9**	**-**

When these figures are interpreted, it must be borne in mind that substantial price reductions have in many cases made a switch to another supplier an unattractive proposition. Account also has to be taken of customer preferences, psychological and cultural factors and the extraordinarily high degree of customer satisfaction with the services provided by their suppliers.

No accurate figures are available on industrial customers who switch suppliers: these are not covered anywhere. Rates of switching are presumably much higher than with households and small businesses. Branch managers and businesses established in more than one location have generally tried to keep to one supplier. Large industrial customers in particular will take full advantage of all options when it comes to buying electricity. As well as having contracts with one or more suppliers, they may obtain electricity via the power exchanges. The majority of industrial customers have probably taken advantage of the possibilities offered by competition on an open market, especially the chance to renegotiate prices.

Around 3.6% of smaller and medium-sized commercial customers switched suppliers in the autumn of 2000 and 50% negotiated new contracts.

GREECE

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**1**	**1**
Number of generating companies producing at least 5% of total net generation	**1**	**1**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
PPC	**98**	**97**	**98**	**97**
Other generators	2	3	2	3

Source: 1999 figures, Eurelectric
2000 figures, Public Power Corporation (PPC)

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	7 692	7 660
Nuclear		
Hydro	2 959	2 967
Wind	82	226
Geothermal		
Solar		
Other		
TOTAL	**10 733**	**10 853**

	1999	2000
Maximum load (MW)	**7 366**	**8 531**

Source: Eurostat

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		
Amount of capacity decommissioned (MW)		

No data available

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Albania	126	960	50	1 111
FYROM	559	448	1067	205
Bulgaria	1 128	244	612	424
TOTAL	**1 813**	**1 652**	**1 729**	**1 740**

Source: Eurostat

2.2 Inter-connectors transmission capacity and load factor

The following table presents indicative values for Net Transfer Capacities from/to Greece. They correspond to the Winter 2000-2001, working days, peak hours (Non binding values). Only the values provided by Greece are shown.

From:	To:	MW
Greece	Albania	200
	Bulgaria	700
	FYROM	600
Albania	Greece	200
Bulgaria	Greece	600
FYROM	Greece	500

Source: ETSO

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**1**	**1**
Total number of electricity suppliers to final customers	**1**	**1**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
PPC	**100**	**100**

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

In 2000, this indicator is not applicable to Greece.

SPAIN

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**4**	**4+**
Number of generating companies producing at least 5% of total net generation	**4**	**4**

In 2000, the four main generating companies accounted for 82.3% of the national net electricity generation. The remainder was produced by independent power producers from renewable energy sources and cogeneration.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Endesa	51.8	42.4	45.6	43.2
Iberdrola	25.1	22.9	36.7	30.0
Union Fenosa	14.1	10.8	12.0	9.8
Cantabrico	8.3	6.2	5.0	4.0
Aggregated share	**99.3**	**82.3**	**99.3**	**87.0**
Other generators	0.7	17.7	0.7	13.0

1999 figures source: Comisión Nacional de la Energía (CNE)

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	25 644	25 492
Nuclear	7 354	7 503
Hydro	17 920	17 738
Wind	1 495	1 882
Geothermal		
Solar	9	12
Other		
TOTAL	**52 422**	**52 627**

	1999	2000
Maximum load (MW)	**31 247**	**33 236**

Source of installed capacity: Eurostat
Source of maximum load: Red Eléctrica de España (REE)

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**1 720**	**2 012.3**
Amount of capacity decommissioned (MW)	**85**	**22.5**

1999 figures source: Comisión Nacional de la Energía (CNE)

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
France	7 466	581	8 500	595
Portugal	4 485	3 631	3 765	4 697
Morocco	0	1 811	0	2 263
Andorra	0	211	0	272
TOTAL	**11 951**	**6 234**	**12 265**	**7 827**

2.2 Inter-connectors transmission capacity and load factor

The following table presents indicative values for Net Transfer Capacities from/to Spain. They correspond to the Winter 2000-2001, working days, peak hours (Non binding values). Only the values provided by Spain are shown.

From:	To:	MW
Spain	France	1 000
	Portugal	850
	Morocco	350
France	Spain	1 100
Portugal	Spain	725
Morocco	Spain	300

Source: ETSO

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**3**	**3**
Total number of electricity suppliers to final customers		**150**

Total number of suppliers in 1999 is not available.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Company A	46.1	40
Company B	40.1	39
Company C	10.3	15
Aggregated share	**96.5**	**94**
Other suppliers	3.5	6

1999 figures source: Comisión Nacional de la Energía (CNE)

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	-	-	-	-
Customer renegotiating	-	-	-	-

This particular information is not available. However, some estimation can be done from purchases of electricity in the liberalised market. In 1999, final customers in the liberalised market acquired 26 929 GWh (16% of the total demand), while in 2000 they acquired 46 745 GWh (26 % of the total demand). That means that during year 2000, final customers consuming approximately 20 000 GWh (at least 10% of the total demand) renegotiated their contracts, passing from the regulated system to the liberalised market.

FRANCE

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**2**	**3**
Number of generating companies producing at least 5% of total net generation	**1**	**1**

Total production of electricity in France amounted for 500 TWh in 1999 and for 516 TWh in 2000.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
EDF	**90.2**	**90.2**	**87.5**	**86.9**
Compagnie Nationale du Rhône (CNR)	3.6	3.6	2.6	2.6
SNET	1.4	1.4	2.2	2.2
Other generators	4.8	4.8	7.7	8.3

In 1999 the CNR power plants were operated by EDF.

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	26 213	26 799
Nuclear	63 183	63 183
Hydro	25 170	25 356
Wind	25	66
Geothermal		
Solar		
Other		
TOTAL	**114 591**	**115 404**

	1999	2000
Maximum load (MW)	**71 900**	**72 400**

Maximum loads were reached on 21.12.99 at 19h00 and on 12.01.00 at 19h00.

Monthly evolution of maximum loads during 1999 and 2000 is shown in the following table (in GW):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1999	71,0	68,5	60,7	61,6	52,4	52,4	53,1	51,3	53,2	59,9	67,5	71,9
2000	72,4	65,3	63,9	63,3	54,2	53,4	53,9	52,3	53,1	59,9	66,4	64,9

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**1 705**	**1 272.3**
Amount of capacity decommissioned (MW)	**138**	**686**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Belgium	1 012	5 973	202	8 512
Luxembourg	0	42	0	42
Germany	523	14 196	618	15 653
Switzerland	2 410	9 339	1 888	9 559
Italy	439	15 760	392	16 126
Andorra	0	59	0	81
Spain	581	7 468	595	8 504
United Kingdom	0	15 271	0	14 697
TOTAL	**4 965**	**68 108**	**3 695**	**73 174**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MW)	Load factor (%)
France – United Kingdom	270	2000	
France – (Belgium+Germany)	400/225	3700	
France – (Switzerland+Italy)	400/225/150	4900	
France – Spain	400/225/150	1100	
France – Germany	400/225	2850	
France – Italy	400/225	2000	

Data on load factor is not available

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**1**	**1**
Total number of electricity suppliers to final customers	**178**	**174 +**

There are 172 distributors: EDF plus 171 local distribution companies. Electricity sold by local distributors represents 4% of total electricity consumption in France. The most important local distributor sold about 6 TWh, almost 1% of total consumption.

In addition, there are other suppliers:

- SNET(30% owned by the Spanish company Endesa).
- Energie du Rhône (sells the electricity produced by CNR and is 49% owned by the Belgium company Electrabel).
- Other local and foreign suppliers recorded in a list published by the Commission de régulation de l'électricté (French electricity regulator). This list is available from: www.cre.fr. On 20.03.2002 this list showed 41 suppliers, including EDF, SNET and Energie du Rhône.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000

According to EDF informations, during year 2000, no operator other than EDF sold more than 5% of total electricity supplied to final consumers. Sales to eligible consumers do not require the control or authorisation of the Administration and, for the time being, there are no data on the market shares of each supplier. However, it is estimated that at the end of 2000, new operators were supplying about 6% of the eligible market, rising to 13% at the end of 2001.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**6**	**5 400**	**-**	**-**
Customer renegotiating	**-**	**-**	**-**	**-**

The percentages shown for the industrial consumers have been calculated taking into account eligible consumers. During year 2000 eligibility was fixed at an annual consumption of 16 GWh corresponding to 30% of the electricity market. About 1 300 premises were declared eligible consumers representing an annual demand of about 130 TWh.

No figures are available for contract renegotiation by eligible consumers. However, as a result of the arrival of new competitors, most of the eligible consumers have renegotiated their supply contracts during the first two years of market opening.

This indicator is not applicable to domestic consumers.

IRELAND

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**1**	**1**
Number of generating companies producing at least 5% of total net generation	**1**	**1**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
ESB	**97**	**97**	**95**	**97**
Other generators	3	3	5	3

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	3 751	4 191
Nuclear		
Hydro	525	531
Wind	67	120
Geothermal		
Solar		
Other	15	
TOTAL	**4 358**	**4 842**

	1999	2000
Maximum load (MW)	**3 757**	**3 844**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**0**	**105**
Amount of capacity decommissioned (MW)	**0**	**0**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
United Kingdom	290	49	168.2	71.8
TOTAL	**290**	**49**	**168.2**	**71.8**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MW)	Load factor (%)
Ireland – Northern Ireland (UK)	275	300	9.13

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**1**	**1**
Total number of electricity suppliers to final customers		**6**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000

There was no supplier other than ESB Public Electricity Supplier supplying more than 5% of total electricity consumed in 2000.

Individual market shares are confidential.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	-	**3.28**	-	-
Customer renegotiating	-	-	-	-

The market only opened in February 2000, therefore there was no renegotiation of contracts with suppliers, as customers were moving for the first time. In addition, the eligible market was over 4 GWh (32% of total annual consumption), so the only other way to change supplier was to move to a "Green" (renewable, sustainable or alternate) supplier, thus the number of customers was limited for this period. 4 967 customers, including eligible and "Green", switched supplier representing a consumption of 3 275 MWh.

Some "Green" (renewable, sustainable or alternate) customers at domestic level did switch supplier but the number and the corresponding MWh are statistically insignificant, being the data of only one supplier for the year 2000. Consequently, it has not been provided.

ITALY

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**9**	**62**
Number of generating companies producing at least 5% of total net generation	**2**	**4**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Company A	71.1	46.7	78.0	51.6
Company B	5.1	8.7	3.0	9.4
Company C		7.6		7.7
Company D		5.0		3.7
Agregated share	**76.2**	**68.0**	**81.0**	**72.4**
Other generators	23.8	32.0	19.0	27.6

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	54 808	56 431
Nuclear		
Hydro	20 564	20 658
Wind	238	364
Geothermal	621	626
Solar		6
Other		
TOTAL	**76 231**	**78 085**

	1999	2000
Maximum load (MW)	**42 731**	**49 019**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		**2 772**
Amount of capacity decommissioned (MW)		**1 047**

No data available for 1999.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
France	15 769	440	16 175	404
Switzerland	21 682	50	22 165	8
Austria	1 686	0	1 958	0
Slovenia	3 400	38	4 533	72
TOTAL	**42 537**	**528**	**44 831**	**484**

2.2 Inter-connectors transmission capacity and load factor

The following table presents indicative values for Net Transfer Capacities from/to Italy. They correspond to the Winter 2000-2001, working days, peak hours (Non binding values). Only the values provided by Italy are shown.

From:	To:	MW
Austria	Italy	200
Austria + Slovenia	Italy	500
France	Italy	2 000
France + Switzerland	Italy	4 900
Slovenia	Italy	300
Switzerland	Italy	2 900

Source: ETSO

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers		**2**
Total number of electricity suppliers to final customers		**194**

No data available for 1999.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Supplier A		65
Supplier B		7
Aggregated share		**72**
Other suppliers		28

No data available for 1999

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

LUXEMBOURG

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation		
Number of generating companies producing at least 5% of total net generation		

Luxembourg has few domestic energy resources with only a small amount of hydro generation. Most electricity is imported from Germany and Belgium. Generation and supply of electricity are split between Sotel and Cegedel:

- Sotel supplies the iron and steel industry mainly with power imported from Belgium

- Cegedel supplies all domestic consumers and the remainder of industry either directly or through some resale agencies. Cegedel also operates the main grid and gets most of its electricity (90%) from Germany while the remaining 10% is produced by cogeneration, wind and hydro plants.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000

Not applicable.

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	86	72
Nuclear		
Hydro	1 139*	1 139*
Wind	9	15
Geothermal		
Solar		
Other		
TOTAL	**1 234**	**1 226**

* Pumping station

	1999	2000
Maximum load (MW)	**569**	**593**

Maximum load figures are for Cegedel. In 2000, Sotel maximum load was 369 MW

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		**30.5**
Amount of capacity decommissioned (MW)		**0**

No data available for 1999.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Germany	4 229	657	4 441	735
Belgium	1 946	0	2 017	0
TOTAL	**6 175**	**657**	**6 458**	**735**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MVA)	Load factor (%)
Germany – Luxembourg	2 x 220	2 x 490	
Germany – Luxembourg	2 x 220	2 x 490	
Belgium - Luxembourg	2 x 220	2 x 358	
Belgium - Luxembourg	2 x 150	2 x 157	

Data on load factor is not available.

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**2**	**2**
Total number of electricity suppliers to final customers	**2**	**2**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Cegedel	64	63
Sotel	36	37
Aggregated share	**100**	**100**

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

NETHERLANDS

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**83**	**11**
Number of generating companies producing at least 5% of total net generation	**4**	**6**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Aggregated share of 3 top companies		51.4		59.2
Aggregated share of next 3 companies		27.7		23.0
Aggregated share of 6 top companies		**79.1**		**82.2**
Other generators		20.9		17.8

Individual market shares are confidential. No data available for 1999.

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	19 724	19 665
Nuclear	449	449
Hydro	37	38
Wind	409	442
Geothermal		
Solar	10	13
Other	46	46
TOTAL	**20 675**	**20 635**

	1999	2000
Maximum load (MW)		

No data available for maximum load.

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		**0**
Amount of capacity decommissioned (MW)		**0**

No data available for 1999.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Germany	17 158	663	14 326	975
Belgium	5 250	3 086	2 283	3 045
France			5 258	0
Other countries			14	11
TOTAL	**22 408**	**3 749**	**21 881**	**4 031**

The breakdown provided for 2000 includes France and other countries (Sweden and Switzerland). These are the countries of first origin or final destination although the electricity arrived in or left the Netherlands via Germany or Belgium.

2.2 Inter-connectors transmission capacity and load factor

INTERCONNECTORS	Voltage(kV)	Transmission Capacity (MVA)	Load factor (%)
Meeden (NL)-Diele(G)	380	1 645	
Meeden (NL) – Conneforde (G)	380	1 645	
Hengelo (NL) - Gronau W (G)	380	1 645	
Hengelo (NL) - Gronau Z (G)	380	1 645	
Maasbracht (NL) - Rommerskirchen (G)	380	1 710	
Maasbracht (NL) - Siersdorf (G)	380	1 710	
Maasbracht (NL) - Gramme (B)	380	1 645	
Maasbracht (NL) - Meerhout (B)	380	1 645	
Geertruidenberg (NL) - Zandvliet (B)	380	1 645	
Borssele (NL) - Zandvliet (B)	380	450	
Oostburg (NL) - Maldegem (B)	150	139	

Load factor information is not available.

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**7**	**7**
Total number of electricity suppliers to final customers		**33**

Total number of suppliers is not available for 1999.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Aggregated share of 3 top suppliers		48
Aggregated share of next 4 suppliers		26
Aggregated share of 7 top suppliers	**71.4**	**74**
Other suppliers	28.6	26

Individual market shares are confidential

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

AUSTRIA

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**55**	**54**
Number of generating companies producing at least 5% of total net generation	**6**	**5**

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Verbund-Austrian Hydro Power AG *	21.43	32.6	11.5	24.3
Österreichische Draukraftwerke AG	7.72	9.0	12.3	12.2
Tiroler Wasserkraftwerke AG	confident.	confident.	confident.	confident.
Wiener Stadtwerke WIENSTROM	7.90	confident.	8.2	confident.
Steirische Wasserkraft-und Elektrizitäts AG	6.13	6.0	5.9	6.4
Company X (only applicable to 1999)	confident.		confident.	
Aggregated share	**54.3**	**58.9**	**55.0**	**58.3**
Other generators	45.7	41.1	45.0	41.7

* In 1999 this company was Österreichische Donaukraftwerke AG. It has changed its name and some some other companies have merged into (a process over at least two years).

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	6 327	6 525
Nuclear		
Hydro	11 647	11 664
Wind	48	49
Geothermal		
Solar		
Other		
TOTAL	**18 023**	**18 238**

	1999	2000
Maximum load (MW)	**8 850**	**9 218**

Maximum load information refers to the data available on the third wednesday of each month.

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		
Amount of capacity decommissioned (MW)		

No data available for this indicator.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Germany	5 573	4 972	7 362	5 410
Switzerland	376	3 144	212	4 174
Italy	0	1 686	0	1 945
Slovenia	6	3 570	22	3 259
Hungary	2 018	66	843	426
Czech Republic	3 635	68	5 481	2
TOTAL	**11 608**	**13 418**	**13 920**	**15 216**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector		Voltage (kV)	Transmission capacity (MVA)	Load factor (%)
From country	To country			
TSO-Area VKW (Vorarlberg)				
Austria	Switzerland	220	255	85
Austria	Germany	110/220/380	ND	-
TSO-Area TIRAG (Tirol)				
Austria	Germany	110/220	ND	-
TSO-Area APG (Burgenland, Kärnten, Niederösterreich, Oberösterreich, Salzburg, Steiermark, Wien)				
Austria	Czech Rep.	220/380	ND	-
Czech Rep.	Austria	220/380	750	83
Austria	Slovenia	220/380	758	49
Slovenia	Austria	220/380	ND	-
Austria	Italy	220	270	82
Italy	Austria	220	ND	-
Austria	Switzerland	380	ND	-
Austria	Germany	220/380	ND	-

ND: Net Transfer Capacity (NTC) not defined.
Load factor %: Annual mean value of physical load flow divided by annual mean value of NTC.
Load factor "-":No restriction / congestion for the market

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**6**	**7**
Total number of electricity suppliers to final customers	**175**	**170**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Wiener Stadtwerke WIENSTROM	17.8	confident.
EVN Energie-Versorgung Niederösterreich AG	confident.	confident.
Energie AG Oberösterreich (Oberösterreich)	confident.	confident.
Kärntner Elektrizitäts-AG	confident.	confident.
Tiroler Wasserkraftwerke AG	5.1	confident.
Österreichische Elektrizitätswirtschaft AG	confident.	6.0
Steirische Wasserkraft- und Elektrizitäts-AG	4.7	5.1
Aggregated share	**58.3**	**67.3**
Other suppliers	41.7	32.7

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

PORTUGAL

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**3+**	**3+**
Number of generating companies producing at least 5% of total net generation	**3**	**3**

95% of national net electricity generation is achieved with the 3 main generating companies and the so called special regime generators (combined heat and power plants, wind generators and other generators), which are very disperse in terms of share of total national electricity generation.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999*	2000	1999*	2000
CPPE (EDP Group)	73.9	58.5	73.7	66.7
Turbogas	3.6	14.4	6.3	9.2
Tejo Energia	8.0	11.2	3.4	5.7
Aggregated share	**85.5**	**84.1**	**83.4**	**81.6**
Other generators	14.5	15.9	16.6	18.4

** Figures for 1999 refers to the situation at the end of 1998.*

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	5 016	5060
Nuclear		
Hydro	4 527	4 208
Wind	57	75
Geothermal	10	
Solar		
Other**	1140	1367
TOTAL	**10 570**	**10 710**

	1999	2000
Maximum load (MW)	**6 122**	**6 403**

*** Combined heat and power generation is included under Other*

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		**272**
Amount of capacity decommissioned (MW)		**50**

No data available for 1999.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Spain	3 513	4 453	4 698	3 767
TOTAL	**3 513**	**4 453**	**4 698**	**3 767**

2.2 Inter-connectors transmission capacity and load factor

Interconnectors		Voltage	Transmission Capacity (MVA)		Load factor (%)
Portugal	**Spain**	(kV)	Summer (30°C)	Winter (15ºC)	
Pocinho	Saucelle	220	268	344	
Pocinho	Aldeadávila	220	200	295	
Bemposta	Aldeadávila	220	200	295	
Alto Lindoso	Cartelle	400	1036	1330	
Pego	Cedillo	400	790	1020	

Data on load factors are not available.

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers		**1**
Total number of electricity suppliers to final customers		**13**

In Portugal, suppliers are at the same time distributors and retailers. There is one major supplier and a few local suppliers.

No data available for 1999.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
EDP Distribuição – Energia S.A.		**99.5**
Other suppliers		0.5

No data available for 1999.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**4.2**	**538.35**	**-**	**-**
Customer renegotiating	**-**	**-**	**-**	**-**

The percentage shown for the industrial consumers have been calculated taking into account the eligible consumers. In terms of total electricity consumption it should be about 1.4%.

FINLAND

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**38**	**38**
Number of generating companies producing at least 5% of total net generation	**4**	**4**

Total number of electricity generating companies was 131 in 1999 and 138 in 2000.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Company A	26	23.3	27	26.6
Company B	21	20.9	11	10.3
Company C	7	7.8	8	7.9
Company D	6	6.9	5	5.4
Aggregated share	**60**	**58.9**	**51**	**50.2**
Other generators	40	41.1	49	49.8

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	10 843	10 960
Nuclear	2 640	2 640
Hydro	2 937	2 938
Wind	38	38
Geothermal		
Solar		
Other		
TOTAL	**16 458**	**16 576**

	1999	2000
Maximum load (MW)	**13 080**	**12 400**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**46**	**210**
Amount of capacity decommissioned (MW)	**46**	**92**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Norway	107	104	132	173
Sweden	6 040	128	7 555	153
Russia	5 209	0	4 519	0
TOTAL	**11 356**	**232**	**12 206**	**326**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Rated voltage (kV)	Transmission capacity (MW)		Load factor (%)
Finland – Sweden:		From Sweden	To Sweden	50
Ossauskoski - Kalix	220~	1500	900	
Petäjäskoski - Letsi	400~			
Keminmaa - Svartbyn	400~			
Raumo - Forsmark	400	550	550	
Tingsbacka - Senneby	110~	80	80	
Finland – Norway:		From Finland	To Finland	41
Ivalo - Varangerbotn	220~	100	70	
Finland – Russia:		From Finland	To Finland	51
Imatra - GES10	110~		100	
Nellimö - Kaitakoski	110~	60	60	
Ylikkälä - Viborg	2*400~		1000	

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers		**3**
Total number of electricity suppliers to final customers		**100+**

No data available for 1999.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Supplier A		11
Supplier B		10
Supplier C		6
Agregated share		**27**
Other suppliers		73

No data available for 1999.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**10 e**	**34 000 e**	**4**	**2 000 e**
Customer renegotiating	**20 e**	**42 000**	**15 e**	**5 000**

e = estimation

Total volume of industrial customers is approximately 57 TWh and total volume of domestic customers is approximately 20 TWh.

Instead of the "domestic versus industrial" breakdown, the electricity data collecting organisations in Finland use "residential buildings and properties versus other". So, "Industrial" in this case also includes other commercial consumption (service branch, offices etc.) For that reason, the total volumes and a part of the above mentioned numbers are only approximations. In reality almost every one of the truly industrial customers has renegotiated its contract in relation to price of electricity.

SWEDEN

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**38**	**7**
Number of generating companies producing at least 5% of total net generation	**3**	**3**

1.2 Percentages of total generation and capacity by generating company

Generating companies*	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Company A	confident.	49.5	confident.	51.8
Company B	confident.	19.4	confident.	21.7
Company C	confident.	15.3	confident.	16.4
Aggregated share	**65.2**	**84.2**	**57.4**	**89.9**
Other generators	34.8	15.8	62.6	10.1

* Power from wholly-owned subsidiaries is included in 2000 but not in1999.

Generation figures exclude minority shares. Contracted power is included in the companies that have the power at their disposal.

In addition to the data in the table, the fourth company in the market (Company D) has a 4.5% share in generation and in capacity during 2000.

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	7 375	7 526
Nuclear	10 076	9 461
Hydro	16 433	16 329
Wind	196	249
Geothermal		
Solar		
Other		
TOTAL	**34 080**	**33 565**

	1999	2000
Maximum load (MW)	**25 800**	**26 000**

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**46**	**600**
Amount of capacity decommissioned (MW)	**1 155**	**1 115**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Denmark	1 600	2 100	1 619	3 392
Finland	900	6 800	830	8 234
Germany	100	1 300	83	915
Norway	5 900	5 900	15 723	664
Poland	0	0	53	425
TOTAL	**8 500**	**16 100**	**18 308**	**13 630**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MW)		Load factor (%)	
		From Sweden	To Sweden	From Sweden	To Sweden
Denmark- Sweden	132~	350	350	6.9	14.7
Denmark- Sweden	400~	800	800		
Denmark- Sweden	400~	800	800		
Denmark- Sweden	250	290	270		
Denmark- Sweden	285	380	360		
Denmark- Sweden	60~	60	60		
TOTAL Denmark- Sweden		2 680	2 640		
Finland – Sweden	220~	1500	900	4.4	61.4
Finland – Sweden	400~				
Finland – Sweden	400~				
Finland – Sweden	400	550	550		
Finland – Sweden	110~	80	80		
TOTAL Finland – Sweden		2 130	1 530		
Norway- Sweden	132~	50	120	51.4	1.7
Norway- Sweden	400~	700	1350		
Norway- Sweden	220~	415	415		
Norway- Sweden	220/66~	50	50		
Norway- Sweden	275~	490	490		
Norway- Sweden	132~	40	20		
Norway- Sweden	132~	100	100		
Norway- Sweden	400~	1650	2 000		
TOTAL Norway- Sweden		3 495	4 545		
Sweden - Germany	450	600	600	1.6	17.4
Sweden - Poland	450	600	600	1.0	8.1

Source: Nordel

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**3**	**3**
Total number of electricity suppliers to final customers	**165**	**165**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Supplier A	confident.	28.1
Supplier B	confident.	10.9
Supplier C	confident.	8.0
Aggregated share	**52.1**	**47.0**
Other suppliers	47.9	53.0

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

UNITED KINGDOM

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**18**	**32+**
Number of generating companies producing at least 5% of total net generation	**6**	**8**

In 2000, 32 companies accounted for 93% of national total generation. The remaining 7% was autogeneration.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Aggregated share of 3 top companies	51.2	44.2	43.2	35.9
Aggregated share of next 3 companies	20.3	18.5	18.4	19.0
Aggregated share of next 2 companies	8.1	10.2	8.1	14.4
Aggregated share of top 8 companies	**80.5**	**72.9**	**69.7**	**69.3**
Other generators	19.5	27.1	30.3	30.7

Individual market shares are confidential

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	58 084	61 956
Nuclear	12 956	12 486
Hydro	4 265	4 273
Wind	151	174
Geothermal		
Solar		
Other		2
TOTAL	**75 456**	**78 891**

	1999	2000
Maximum load (MW)	**57 849**	**58 452**

Source of installed capacity: Eurostat.

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)	**2 774**	**3 925**
Amount of capacity decommissioned (MW)	**940**	**1 451**

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
France	14 480	0	14 267	1
Republic of Ireland	27	262.8	41	133
TOTAL	**14 507**	**262.8**	**14 308**	**134**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MW)	Load factor (%)
Scotland - England	400	1 200*	Over 70*
England - France	High Voltage	2000	Around 80
Northern Ireland – Rep. of Ireland	275	300	<7

** Average capacity has been much higher than this nominal capacity; the load factor reflects this average capacity. If nominal capacity is used to calculate load factor then a load factor in excess of 90% results.*

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**9**	**8**
Total number of electricity suppliers to final customers	**29**	**22**

Number of electricity suppliers selling at least 5% of total electricity consumed by final customers in 1999 is estimated from Eurelectric data. According to the DTI, there were 8 companies achieving that percentage for industrial users, 9 companies for commercial users and 10 companies for domestic consumers. Therefore, both sources produce similar results.

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Aggregated share of 3 top suppliers	33.6	42.3
Aggregated share of next 3 suppliers	29.2	29.2
Aggregated share of next 2 suppliers	13.3	13.2
Aggregated share of top 8 suppliers	**76.1**	**84.7**
Other suppliers	23.9	15.3

Individual market shares are confidential.

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

No data available for this indicator.

NORWAY

1. Generation variables

1.1 Number of main generating companies

	1999	2000
Number of generating companies representing at least 95% of total net generation	**5+**	
Number of generating companies producing at least 5% of total net generation	**5**	

The total number of electricity plants in 1999 was 346 (162 power producing plants and 184 other plants).

No data available for 2000.

1.2 Percentages of total generation and capacity by generating company

Generating companies	Share in generation (%)		Share in capacity (%)	
	1999	2000	1999	2000
Aggregated share of top 5 companies	**50.2**		**54.2**	
Other generators	49.8		45.8	

No data available for 2000.

1.3 Capacity by type of plant and maximum demand information

	Installed capacity (MW)	
	1999	2000
Conventional Thermal	205	
Nuclear		
Hydro	27 653	
Wind	13	
Geothermal		
Solar		
Other	262	
TOTAL	**28 133**	**28 162**

	1999	2000
Maximum load (MW)	**21 712**	**22 603**

Source of total installed capacity for 2000: Eurostat.

1.4 Amount of new capacity connected and capacity decommisioned during the year

	1999	2000
Amount of new capacity connected (MW)		
Amount of capacity decommissioned (MW)		

In 1999 the net increase in capacity was 255 MW. In 2000, Nordel has reported a 33 MW of commissioned capacity and nil deommissioned capacity.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

GWh

Country of origin/destination	1999		2000	
	Imports	Exports	Imports	Exports
Denmark	622.5	2 759.4	146	4 634
Finland	103.5	106.3	174	131
Russia	232.2	0	236	0
Sweden	5 898.4	5 910.2	919	15 763
TOTAL	**6 856.6**	**8 775.9**	**1 474**	**20 529**

2.2 Inter-connectors transmission capacity and load factor

Inter-connector	Voltage (kV)	Transmission capacity (MW)		Load factor (%)
		Import capacity	Export capacity	
Norway – Russia	132	50	-	
Norway – Finland	132	50	70	
Norway – Sweden	200, 300 and 420	2885	3235	
Norway – Denmark	250	1040	1040	

Data on load factor is not available.

3. Retailing variables

3.1 Number of electricity suppliers to final customers

	1999	2000
Number of electricity suppliers selling at least 5% of total electricity consumed by final customers	**3**	**4**
Total number of electricity suppliers to final customers	**179**	**155**

3.2 Market shares of suppliers to final customers

Electricity suppliers	Market share (%)	
	1999	2000
Aggregated share of suppliers with at least 5%	**39.5**	**45.9**
Other suppliers	60.5	54.1

3.3 Prices to final customers

*See **ANNEX III**.*

3.4 Final customers switching supplier or renegotiating contracts

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching	**7.1**	**-**	**11.2**	**-**
Customer renegotiating	**-**	**-**	**-**	**-**

The volumes represented by the consumers switching supplier are not available. Also, there are not information on contracts renegotiated.

ANNEX I

List of indicators and definitions

List of indicators proposed to monitor the progress of competition in the electricity market

REFERENCE YEAR: 2000

1. Generation variables

1.1 Number of main generating companies

For this indicator, we request two figures:

1.1.a) Number of generating companies representing at least 95% of the national net electricity generation.

1.1.b) Number of generating companies producing at least 5% of the national net electricity generation.

1.2 Percentages of total generation and capacity by generating company

Share of generation and installed capacity for generating companies with at least 5% of the national electricity generation/capacity. The calculation of the shares has to be based on net production and net capacity, that is, excluding own use by plants.

Identification of the company names is desirable, although data can be presented anonymously if such names cannot be mentioned. If no individual percentages can be provided for confidential reasons, some level of aggregation is requested, i.e. the aggregated share of three main companies, then the next three main companies, and so on.

These variables can be presented in tabular form as follows:

	Share in Generation	Share in installed capacity
Generating company A		
Generating company B		
Generating company C		
Aggregated share of A+B+C		
…		

1.3 Capacity by type of plant and maximum demand information

Information at national level about the net capacity (excluding power plant's own consumption of electricity) by type of technology on 31st December and the maximum electricity demand (peak load) during the period considered (year 2000). This

information should be in line with the data provided in the annual questionnaire of electricity.

The installed capacity can be presented in tabular form as follows:

	Installed capacity (MW)
Conventional thermal	
Nuclear	
Hydro	
Wind	
Geothermal	
Solar	
Other	
TOTAL	

Maximum load in year 2000 (MW)	

1.4 Amount of new capacity connected and capacity decommissioned during the year

For this indicator, we request two figures both in MW:

1.4.a) Amount of new capacity connected during the year.

1.4.b) Amount of capacity decommissioned during the year.

The difference between these two indicators should represent the net increase or decrease in the installed capacity during the year 2000.

2. Transmission variables

2.1 Imports and exports by country of origin and destination

We request the annual flow of electricity (in GWh) imported from and exported to each Member State and non-EU countries. This information should be in line with the data provided in the annual questionnaire of electricity.

It can be presented in tabular form as follows:

Country of origin/destination	Imports (GWh)	Exports (GWh)
Country A		
Country B		
Country C		
….		
TOTAL		

2.2 Interconnection capacity and load factor

For each interconnector of the transmission system, we request the connected countries, the voltage (in kV), the transmission capacity (in MVA) and the load factor over the year (in %). In case of several TSO areas at a national level, the same data is requested for domestic interconnectors. If this information is not available at interconnector level, it can be presented at national connections level (country by country).

The transmission capacity requested is the technical capacity defined as the maximum electricity flow permissible through the interconnector. The concept of Net Transfer Capacity (NTC) defined by UCTE is equivalent to this definition.

Regarding the load factor, it is affected by the fact that not all technical capacity is available for commercial use. However, it can still provide an estimation of the average usage of the interconnector.

This variable can be presented in tabular form as follows:

INTERCONNECTORS	Voltage (kV)	Transmission capacity (MVA)	Load factor (%)
Name (Country X)-Name(Country Y)			
Name (Country X)-Name(Country Y)			
Name (Country X)-Name(Country Z)			
Name (Country X)-Name(Country Z)			
….			

3. Retailing variables

3.1 Number of electricity suppliers to final customers

For this indicator, we request two figures:

3.1.a) Number of electricity suppliers selling at least 5% of total electricity consumed by final customers.

3.1.b) Total number of electricity suppliers to final customers.

The definition of electricity suppliers has to be clarified. Due to the different development of the liberalisation one can find Member States where electricity suppliers are at the same time distributors (i.e. they transport electricity in the low and medium voltage networks) and retailers (i.e.they sell electricity to final consumers) while in other countries we find traders selling electricity to final consumers by using the network of "pure" distribution companies. Also, it is possible to find generators who sell electricity directly to final consumers.

The whole section on retailing tries to analyse how competition works in the market (or markets) where final consumers buy the electricity they need. Therefore, final electricity consumption in the country is a key figure in this section.

Consequently, we can define electricity supplier in a broad sense, saying that it is a company selling to final consumers a part (or a kWh) of the final electricity consumption of the country.

3.2 Market shares of suppliers to final customers

Market shares of electricity suppliers selling at least 5% of total electricity consumed by final customers. As above explained, the calculation of the shares has to be based on the final electricity consumption of the country.

Identification of the company names is desirable, although data can be presented anonymously if such names cannot be mentioned. If no individual percentages can be provided for confidential reasons, some level of aggregation is requested, i.e. the aggregated share of three main companies, then the next three main companies, and so on.

This variable can be presented in tabular form as follows:

	Market share
Supplier company A	
Supplier company B	
Supplier company C	
Aggregated share of A+B+C	
…	

3.3 Prices to final customers

Prices charged to final customers, both domestic and industrial, including those purchasing electricity directly from the generating companies, defined according to load profiles (following the structure introduced by Directive 90/377/EEC).

On this point, we will use the prices for domestic and industrial consumers already reported in accordance with Directive 90/377/EEC. Therefore, no data provision is required. At all events, additional information will be welcome.

3.4 Final customers switching their supplier or renegotiating contracts

For this indicator, we request two figures:

3.4.a) Percentage of final customers switching from one supplier to another during the year and volume of consumption represented by those customers (in GWh).

3.4.b) Percentage of final customers renegotiating contracts with their supplier during the year and volume of consumption represented by those customers (in GWh).

If possible, these figures should be presented broken down by industrial and domestic consumers.

It can be presented in tabular form as follows:

	Industrial customers		Domestic customers	
	Percentage (%)	Volume (GWh)	Percentage (%)	Volume (GWh)
Customer switching				
Customer renegotiating				

ANNEX II

Power exchange market prices

Power exchange market prices

Nord Pool

Monthly average prices during year 2000 in Elspot market (physical day ahead spot market) expressed in EUR/MWh.

	Oslo (Norway)	Sweden	Finland	Denmark West	Denmark East	**SYSTEM**
January	15.28	18.69	18.69	17.79		**16.22**
February	12.87	12.92	12.92	14.31		**12.89**
March	11.34	12.32	12.49	14.53		**11.78**
April	12.65	13.00	13.01	15.93		**12.80**
May	7.45	14.26	14.31	16.80		**9.51**
June	9.11	12.63	12.68	14.58		**10.44**
July	5.94	7.91	9.77	10.28		**6.35**
August	9.37	11.73	14.61	16.67		**9.79**
September	12.93	16.58	18.70	20.49		**14.18**
October	14.85	16.24	16.73	18.44	18.26	**15.43**
November	16.42	17.21	17.21	18.61	19.04	**16.78**
December	16.60	17.34	17.34	18.50	17.55	**16.92**
All year	**12.06**	**14.24**	**14.88**	**16.41**		**12.75**

Source: Nord Pool

APX

Monthly average base prices during year 2000 in the APX day ahead spot market expressed in EUR/MWh.

	Average Base Price
January	109.68
February	52.01
March	34.40
April	38.44
May	57.10
June	35.00
July	32.66
August	58.45
September	35.05
October	37.02
November	40.65
December	48.02

Source: APX

OMEL

Monthly weighted average price in the daily market and monthly weighted average final hourly price during year 2000 expressed in EUR/MWh.

	Daily market price	Final hourly price
January	32.33	40.32
February	35.05	42.17
March	37.54	44.84
April	32.06	39.03
May	24.36	31.95
June	26.32	35.27
July	29.54	36.33
August	27.64	34.57
September	38.71	46.02
October	39.86	46.17
November	36.68	43.71
December	21.82	29.30
All year	**31.83**	**39.13**

Source: OMEL

Note: Final hourly prices are the result of adding the daily market price plus the costs of the technical management and balancing of the market plus the reserved capacity costs

The Electricity Pool of England & Wales

Monthly average PPP and PSP prices in the pool market during 2000 in GBP/MWh, being:

- PPP: Pool Purchase Price, the price at which the major part of generator revenues under the Pool Trading Arrangements (System Marginal Price plus Capacity Payment)

- PSP: Pool Selling Price, the price which forms the basis of payment by Suppliers under the Pool Trading Arrangements (System Marginal Price plus Capacity Payment plus Uplift)

	Monthly average prices	
	PPP	PSP
January	30.96	32.10
February	23.37	23.62
March	17.74	17.88
April	25.68	27.38
May	23.94	24.77
June	20.25	20.98
July	18.83	19.08
August	23.59	25.18
September	40.03	44.27
October	22.07	23.21
November	19.89	20.85
December	17.91	18.39

Source: Electricity Pool. Statistical Digests

LPX

Monthly weighted average price of the Phelix base hourly weighted average price during year 2000 (only from June) expressed in EUR/MWh.

	Phelix Base price
January	
February	
March	
April	
May	
June	15.45
July	14.77
August	15.72
September	21.39
October	18.67
November	22.69
December	23.50

Source: LPX

EEX

Monthly Index Baseload average price during year 2000 (only from August) expressed in EUR/MWh.

	Monthly Index Baseload
January	
February	
March	
April	
May	
June	
July	
August	16.60
September	21.09
October	17.71
November	22.07
December	21.22

Source: EEX

ANNEX III

Final consumer prices

Final consumer prices

Electricity prices charged to final customers, both domestic and industrial, are regularly collected by Eurostat under the Directive 90/377/EEC principles and methodology.

The data collection takes place every six months for prices in force on 1st January and 1st July. The prices are provided for several groups of standard consumers defined according an annual consumption and to load profiles. The following two tables present the standard consumer groups and their characteristics.

Domestic consumers

Standard Consumer	Annual consumption in kWh		Approx. subscribed demand in kW	Standard dwelling
	Total	of which night		
Da	600	-	3	50 m² 2 rooms + kitchen
Db	1 200	-	3-4	70 m² 3 rooms + kitchen
Dc	3 500	(1 300)	4-9	90 m² 4 rooms + kitchen
Dd	7 500	(2 500)	6-9	100 m² 4-5 rooms + kitchen
De	20 000	(15 000)	9	120 m² 5 rooms + kitchen

Industrial consumers

Standard consumer	Annual consumption (kWh)	Maximum demand (kW)	Annual utilisation (Hours)
Ia	30 000	30	1 000
Ib	50 000	50	1 000
Ic	160 000	100	1 600
Id	1 250 000	500	2 500
Ie	2 000 000	500	4 000
If	10 000 000	2 500	4 000
Ig	24 000 000	4 000	6 000
Ih	50 000 000	10 000	5 000
Ii	70 000 000	10 000	7 000

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Domestic electricity prices without taxes in 1999 and 2000
Euro cents per kWh

	Da				Db				Dc			
	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00
Belgium	17.18	17.11	16.64	14.94	16.18	16.12	15.20	14.53	11.82	11.77	11.71	11.68
Denmark	15.06	15.03	15.71	15.76	10.08	10.05	10.55	10.55	6.81	6.78	7.18	7.16
Germany*	19.67	20.00	19.09	18.78	16.15	16.41	15.01	14.92	12.77	12.94	12.05	12.13
Greece	7.77	7.76	7.05	6.93	7.30	7.29	6.61	6.50	6.22	6.21	5.64	5.54
Spain	11.88	11.70	11.45	11.45	11.88	11.70	11.45	11.45	9.29	9.14	8.95	8.95
France	13.10	12.85	12.85	12.78	11.46	11.21	11.21	11.14	9.49	9.28	9.28	9.14
Ireland	13.76	13.76	13.76	13.76	11.37	11.37	11.37	11.37	7.95	7.95	7.95	7.95
Italy	4.58	4.78	6.28	6.92	5.27	5.48	6.61	7.26	15.70	15.78	15.00	16.02
Luxembourg	21.55	21.46	21.14	20.98	16.14	16.07	15.82	15.70	10.76	10.72	10.56	10.48
Netherlands*	13.27	13.14	14.63	16.00	10.81	10.48	11.58	12.94	8.83	8.17	9.38	10.75
Austria	12.21	12.21	11.82	11.85	11.74	11.74	11.34	11.34	9.79	9.79	9.49	9.52
Portugal	12.08	12.08	12.01	12.01	13.91	13.91	13.83	13.83	12.01	12.01	11.94	11.94
Finland	11.98	11.63	11.60	11.60	8.56	8.37	8.34	8.35	6.56	6.46	6.45	6.44
Sweden	16.59	15.86	16.19	16.55	10.52	10.05	10.23	10.50	6.53	6.24	6.37	6.52
United Kingdom	18.19	18.49	20.34	19.05	13.62	14.15	15.23	14.77	9.67	10.05	10.56	10.21
Norway	27.95	25.24	26.29	25.45	15.70	14.18	15.01	14.25	7.65	6.91	7.20	6.58

	Dd				De			
	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00
Belgium	10.77	10.72	10.77	10.93	6.77	6.73	6.81	7.02
Denmark	5.84	5.81	6.17	6.14	5.09	5.05	5.55	5.45
Germany*	11.96	12.16	10.99	11.00	6.94	7.16	6.66	6.39
Greece	7.00	6.99	6.35	6.24	5.35	5.34	4.85	4.77
Spain	8.52	8.39	8.21	8.21	6.09	5.99	5.87	5.87
France	9.19	8.99	8.99	8.86	7.61	7.45	7.45	7.34
Ireland	7.63	7.63	7.63	7.63	5.09	5.09	5.09	5.09
Italy	14.25	14.32	13.62	14.63	-	-	-	-
Luxembourg	10.45	10.41	10.24	10.16	7.07	7.04	6.92	6.87
Netherlands*	8.29	7.46	8.77	10.13	5.78	4.95	6.51	7.87
Austria	9.88	9.88	9.57	9.59	7.62	7.62	7.42	7.27
Portugal	10.66	10.66	10.60	10.60	7.94	7.94	7.90	7.90
Finland	5.48	5.46	5.43	5.42	3.78	3.72	3.73	3.71
Sweden	6.28	6.01	5.83	6.06	5.48	5.19	4.98	5.04
United Kingdom	8.75	9.18	9.64	9.29	5.60	5.96	6.29	6.13
Norway	5.42	4.88	5.53	4.83	4.20	3.78	4.40	3.72

* National price calculated like the arithmetic average of the prices recorded in each location (The Netherlands only for 1999)

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Industrial electricity prices without taxes in 1999 and 2000
Euro cents per kWh

	Ia				Ib				Ic				Id			
	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00
Belgium	14.64	14.55	14.08	14.40	14.84	14.79	14.30	14.64	11.66	11.62	11.41	11.73	8.73	8.70	8.61	8.89
Denmark	5.33	5.28	5.66	5.62	5.29	5.25	5.58	5.55	5.15	5.04	5.34	5.26	4.87	4.75	5.06	4.98
Germany*	16.36	15.81	14.24	13.64	16.20	15.76	13.92	13.40	12.64	12.45	10.29	10.73	9.59	9.78	7.76	8.13
Greece	8.59	8.58	8.42	8.28	8.56	8.55	8.39	8.25	7.90	7.89	7.74	7.61	6.30	6.29	6.17	6.06
Spain	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77	7.37	7.37	7.52	7.52	6.78	6.78	6.91	6.91
France	8.94	8.72	8.72	8.54	8.94	8.72	8.72	8.54	8.22	8.02	8.02	7.85	6.83	6.63	6.63	6.50
Ireland	12.77	12.77	12.77	12.77	12.62	12.62	12.62	12.62	10.88	10.88	10.88	10.88	8.06	8.06	8.06	8.06
Italy	14.31	14.46	13.47	13.62	11.27	11.37	11.81	12.68	8.80	8.89	9.56	10.43	7.89	7.99	8.07	8.94
Luxembourg	13.66	13.55	13.17	12.91	13.84	13.73	13.34	13.07	10.65	10.56	10.27	10.06	8.68	8.61	8.36	8.20
Netherlands*	9.15	9.29	12.44	11.75	9.24	9.41	11.04	10.14	9.60	9.65	8.97	8.23	6.91	6.96	8.32	7.68
Austria	14.91	14.85	14.43	12.65	16.24	16.24	15.67	12.65	11.62	11.40	11.18	10.39	9.48	9.31	-	-
Portugal	10.65	10.65	10.60	10.60	10.45	10.45	10.39	10.39	8.56	8.56	8.52	8.52	7.31	7.31	7.27	7.27
Finland	5.50	5.44	5.39	5.37	5.57	5.52	5.47	5.44	5.13	5.09	5.02	4.98	4.40	4.33	4.30	4.27
Sweden	6.21	5.95	5.56	5.36	6.30	5.89	5.59	5.32	5.46	5.26	5.16	4.91	4.44	4.55	4.59	4.52
United Kingdom	10.61	10.76	10.87	10.99	10.04	10.75	11.37	11.48	8.65	8.42	9.88	10.06	7.08	6.67	7.52	7.39
Norway	5.07	5.12	5.31	4.87	4.83	4.86	5.04	4.60	5.07	5.12	5.41	4.99	3.99	3.98	4.15	3.75

	If				Ig				Ih				Ii			
	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00	Jan 99	Jul 99	Jan 00	Jul 00
Belgium	6.77	6.75	6.73	7.00	5.54	5.52	5.53	5.79	4.86	4.84	4.85	5.10	4.15	4.13	4.16	4.40
Denmark	4.71	4.61	-	-	4.45	4.33	-	-	4.28	4.16	-	-	4.22	4.10	-	-
Germany*	7.70	7.74	6.06	6.35	6.29	6.32	5.05	5.17	6.73	6.74	5.34	5.53	5.73	5.62	4.72	4.78
Greece	5.83	5.82	5.71	5.61	4.90	4.89	4.80	4.72	4.58	4.57	4.49	4.41	4.02	4.01	3.94	3.87
Spain	5.84	5.84	5.96	5.96	5.25	5.25	5.36	5.36	5.26	5.26	5.37	5.37	4.86	4.86	4.95	4.95
France	5.83	5.67	5.67	5.47	5.04	4.91	4.91	4.71	4.65	4.51	4.51	-	4.18	4.06	4.07	-
Ireland	6.18	6.18	6.18	6.18	5.30	5.30	5.30	5.30	5.34	5.34	5.34	5.34	4.85	4.85	4.85	4.85
Italy	6.46	6.56	6.93	7.80	5.25	5.35	5.96	6.83	4.93	5.03	5.40	6.17	4.13	4.23	4.76	5.53
Luxembourg	5.75	5.68	5.42	5.23	4.73	4.68	4.46	4.30	4.92	4.86	4.35	4.38	4.34	4.28	3.84	3.86
Netherlands*	5.63	5.68	-	-	4.82	4.85	-	-	5.08	5.10	-	-	4.56	4.62	-	-
Austria	7.23	-	-	-	5.98	-	-	-	5.62	-	-	-	5.11	-	-	-
Portugal	6.46	6.46	6.43	6.43	5.27	5.27	5.25	5.25	4.72	4.72	4.70	4.70	4.34	4.34	4.31	4.31
Finland	3.83	3.74	3.73	3.71	3.46	3.39	3.37	3.35	2.80	2.72	2.67	2.67	2.69	2.61	2.55	2.55
Sweden	3.17	3.18	3.20	3.34	2.76	2.79	2.83	3.02	2.74	2.82	2.89	3.08	2.57	2.63	2.69	2.88
United Kingdom	5.77	5.08	6.00	6.24	5.51	4.86	5.76	5.75	5.15	4.75	5.12	5.34	5.00	3.89	5.02	4.95
Norway	2.94	2.96	3.05	2.78	2.38	2.37	2.47	2.18	2.25	2.24	2.34	2.05	2.20	2.16	2.28	1.98

* National price calculated like the arithmetic average of the prices recorded in each location (The Netherlands only for 1999)