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ELECTRICITY PRICES

1980 - 1985



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Symbols and abbreviations

- /		Nil
0		Data less than half the unit used
.		No data available
%		Per cent
1980 = 100		Reference year
V		Volt
kV		Kilovolt (= 1 000 V)
kVA		Kilovoltampere
kW		Kilowatt
h		Hour
kWh		Kilowatthour
GWh		Gigawatthour (10 ⁶ kWh)
n		Number
DM	Pf	German mark, Pfennig
FF	Cent	French franc, Centimes
LIT		Italian Lira
HFL	Cent	Dutch guilder, Cents
BFR		Belgian franc
LFR		Luxembourg franc
UKL	P	Pound sterling, Pence
IRL	P	Irish pound, Pence
DKR	Øre	Danish crown, Øre = 1/100 DKR
DR		Greek drachma
PPS		Purchasing power standard
ECU		European currency unit
EUR 10		Ten member countries of the European Communities
Eurostat		Statistical Office of the European Communities

I. INTRODUCTION

This publication is a complete updating of the study on 'Electricity prices 1978-1984' published by Eurostat in 1984.

It gives the prices obtaining in 1985 as well as a historical summary going back to 1980.

The text describes all recent modifications to tariffs, taxation, supply and selling conditions which can influence price levels.

The study has been extended to cover two additional standard consumers; one for domestic usages (7 500 kWh per year), in order to fill a gap in a category which is gaining in importance, the other for industrial usages (24 000 000 kWh per year), in order to provide better coverage of the very large consumers.

The trend analyses and the indices have been rebased on the year 1980 which has been selected as the new reference period.

In order to begin to integrate statistics for Spain and Portugal into the Community scheme, the most recent prices available for these countries are presented in the Community comparison and conclusions.

Otherwise, the definitions and methods are the same as in previous studies on the subject so that it is possible to follow electricity price formation and development over a very long time series. In addition, the definitions are harmonized with those of the International Union of Producers and Distributors of Electrical Energy (Unipede).

This publication is available in four languages: English, French, German and Italian.

The basic survey for the study was carried out by the Statistical Office of the European Communities with the assistance of the national electricity companies and professional associations to whom we express our sincere thanks.

II. CONDITIONS AND METHODS

1. SCOPE AND LOCATIONS

The present study aims to show the actual price of electricity paid by the consumer in the member countries of the European Economic Community.

The prices are recorded at the beginning of each year based on the tariffs, contracts, conditions and rules in force at that time.

It is concerned with the actual price paid by the electricity consumer, corresponding to the invoiced delivery price to the consumer at the beginning of each year including any eventual rebates and subsidies. Our consumers are defined as those who purchase electricity for their own use and exclude those who offer it for resale. We have not considered the bulk price paid by the electricity distributors.

As regards consumers, the study considers all types of customers supplied through the public distribution network with low, medium and high-voltage electricity. In the interests of simplified presentation, consumers are subdivided into two groups, one for domestic and the other for industrial users. The survey does not cover certain industrial consumers:

- (i) who themselves produce part of their electrical energy requirement;
- (ii) who purchase electricity under special contract terms because of their exceptionally high power requirements and consumption demand.

These exceptions are mainly steelmaking and chemical enterprises, enterprises engaged in the production of aluminium and other metals by electrolysis, railways, etc.

Most of these enterprises consume over 10 million kWh annually. They are few in number, but nevertheless consume an appreciable part of the total electrical energy supplied.

In order to reflect as accurately as possible the real position of consumers, it seemed advisable to record prices at selected locations, i.e. towns, conurbations or distribution networks, rather than give average prices per country.

The choice of location is decided by several criteria, namely, population, economic importance, different tariff districts, even geographical coverage of a country, harmonization with the locations used in statistics relating to the prices of other sources of energy, particularly gas.

The prices were recorded in 29 towns or conurbations:

FR of Germany:	Hamburg, Hanover, Dusseldorf, Frankfurt am Main, Stuttgart, Munich, Western Zone, Southern Zone.
France:	Lille, Paris, Marseille, Lyons, Toulouse, Strasbourg.
Italy:	Northern and central Italy, southern Italy and the islands.
Netherlands:	Rotterdam (GEB), North Holland (PEN), North Brabant (PNEM).
Belgium:	The country as a whole (standard national tariff).
Luxembourg:	Grand Duchy (Cegedel).

United Kingdom: London, Glasgow, Leeds, Birmingham.
 Ireland: Dublin.
 Denmark: Copenhagen (KB), North Zealand (NESA).
 Greece: Athens (standard national tariff).

Certain towns selected are representative of larger regions. This is indicated in the chapter concerning each country. Six years are covered by this study: 1980 to 1985.

2. STANDARD CONSUMERS

The survey is based on the system of standard consumers, i.e. the prices are recorded for certain levels of electricity consumption and under certain conditions of supply, chosen as being representative of the population of electricity consumers. These standard levels of consumption remain fixed from one year to the next and for all the countries, this being one of the primary conditions for spatial and temporal comparability of prices.

Two families of standard consumers are taken: domestic uses and industrial uses.

Five domestic standard consumers (supply at low voltage) coded D_a to D_e have been taken:

Standard consumer	Annual consumption kWh		Approx. subscribed demand in kW	Standard dwelling
	Total	(of which night)		
D_a	600	-	≤ 3	50 m ² 2 rooms + kitchen
D_b	1 200	-	3 - 4	70 m ² 3 rooms + kitchen
D_c	3 500	(1 300)	4 - 9	90 m ² 4 rooms + kitchen
D_d	7 500	(2 500)	6 - 9	100 m ² 4-5 rooms + kitchen
D_e	20 000	(15 000)	> 9	120 m ² 5 rooms + kitchen

As a guideline these standard consumers may be expected to possess the following household facilities and appliances:

- D_a Lighting, radio, television, refrigerator, small electric appliances;¹
- D_b as for D_a plus washing machine or dishwasher;
- D_c D_d as for D_b with washing machine and dishwasher plus storage water heater;
- D_e 'all-electric' system with water heater and electric central heating operating on a storage basis.

¹ E.g.: vacuum cleaner, electric toaster, hair dryer, food mixer, coffee grinder, etc.

Seven industrial standard consumers (for voltage see point 4) coded I_a to I_g have been taken:

Standard consumer	Annual consumption kWh	Maximum demand in kW	Annual load factor h
I_a	30 000	30	1 000
I_b	50 000	50	1 000
I_c	160 000	100	1 600
I_d	1 250 000	500	2 500
I_e	2 000 000	500	4 000
I_f	10 000 000	2 500	4 000
I_g	24 000 000	4 000	6 000

The maximum demand is the maximum offtake in any quarter of an hour recorded in one year, expressed in kilowatts (kW). The price of supply is calculated for $\cos \phi = 0,9$. The annual load factor determines the regularity of consumer offtake of electricity from the grid during the year. The longer this time the more even the pattern of consumption during the 8 760 hours of the year. It indicates the number of hours in which the consumer would reach his annual consumption level if the demand level were permanently equal to maximum demand.

Additional details are sometimes needed before the tariffs can be applied:

- (i) In the case of tariffs based on half hourly maximum demand, the maximum demand of the standard consumer is multiplied by a coefficient of 0.98.
- (ii) In the case of tariffs based on a maximum demand expressed in kVA an adjustment is made by dividing the standard consumer's maximum demand in kW by the coefficient $\cos \phi = 0.90$.
- (iii) In the case of tariffs based on maximum demand readings more frequent than once a year the standing charge is multiplied by the following coefficients:

Table of power correction coefficients

Standard consumers:	I_a	I_b	I_c	I_d	I_e	I_f	I_g
Annual load factor:	1 000 h	1 600 h	2 500 h	4 000 h	4 000 h	6 000 h	6 000 h
Maximum monthly demand	0.81	0.83	0.85	0.90	0.90	0.96	0.96
Maximum two-monthly demand	0.83	0.85	0.87	0.91	0.91	0.97	0.97
Maximum three-monthly demand	0.86	0.88	0.90	0.95	0.95	0.98	0.98
Average of the three highest values for max. monthly demand	0.94	0.95	0.96	0.98	0.98	0.99	0.99
Average of the two highest values for max. monthly demand	0.96	0.97	0.98	0.99	0.99	0.995	0.995
Annual max. demand (basic principle)	1	1	1	1	1	1	1

A harmonized table for consumption during 'off-peak' periods has also been compiled in order to be able to calculate prices when tariffs vary according to the time of the day (e.g. lower tariff during the night).

Standard consumer	Annual load factor	Annual consumption	Annual consumption (in 1 000 kWh) charged at off-peak rates according to the average daily duration of off-peak periods					
	h	1 000 kWh	7 h	8 h	9 h	10 h	11 h	12 h
I _a	1 000	30	0	0	0	0	0	0
I _b	1 000	50	0	0	0	0	0	0
I _c	1 600	160	11	13	16	19	22	25
I _d	2 500	1 250	197	225	262	300	338	375
I _e	4 000	2 000	438	500	580	660	740	820
I _f	4 000	10 000	2 190	2 500	2 900	3 300	3 700	4 100
I _g	6 000	24 000	7 140	8 160	9 120	10 080	11 040	12 000

If off peak rates are charged during other periods, for example all day Sunday we have only taken one half as supplementary off peak hours. Such cases are mentioned as they occur in our study.

Account has not been taken of changes in tariff parameters during the course of a year. In other words no weighted price is calculated for a year.

3. DEFINITION OF THE PRICE LEVELS RECORDED

All prices are shown per unit of electricity sold, that is per kilowatt hour (kWh). The results represent the unit price actually paid at the beginning of each year and take account of the relevant tariff, parameter, index, etc. applicable as from 1 January. In the case of tariffs or contracts with short term indices (month, quarter) it is the index which is in force during January which is applied. This means that any changes in the tariff structure during the year are not taken into account, i.e. no price weighting is applied to the year. The prices include meter rental, the standing charge and the commodity rate. They do not include the initial installation charge to the consumer.

If there are several possible tariffs, it is the tariff which is most advantageous to the consumer that is taken into account, after the elimination of the tariffs which are not used in practice or which apply only to a marginal or negligible number of users.

When there are only quasi-tariffs, special contracts, or freely negotiated prices, the most commonly found price (most representative) for the given supply conditions has been recorded. In the case of freely negotiated prices or contracts, the returns relate respectively to the bills paid during the month of January or to the prices resulting from the contracts in force during that month. Such cases are mentioned and explained in the body of our study.

In the case of a consumer having two separate meters or a switch meter (e.g. to record night and day consumption), the price reflects total consumption.

Account has been taken of special tariff or supplementary arrangements which may exist for reactive power.

Three price levels are shown:

- (i) the price net of tax;
- (ii) the price excluding VAT but including all other taxes;
- (iii) the selling price (inclusive of all taxes).

The price excluding tax is obtained directly from the tariffs or contracts.

The price excluding VAT includes, where payable, other specific taxes which is interesting in cases where VAT is deductible.

The price inclusive of all taxes corresponds to the sum paid by the consumer.

'Taxes' is used here to mean fiscal and para-fiscal levies applying directly to electricity at the stage of sale to the consumer. These taxes may be levied at the national, regional, local or municipal level, etc. by the State, regional or local administrations, professional associations, etc.

On the other hand, the taxes levied before the sale of the electricity, such as taxes on companies, profits, wages, etc., which are obviously part of the production or distribution costs, are not calculated separately. They remain an integral part of the price excluding tax.

The results for each country are shown in national currencies at current prices, i.e. at face value.

For the purposes of international comparison, it was necessary to use a representative common monetary unit which would create a minimum of distortion in both space and time. Accordingly, the present study uses the purchasing power standard (PPS). The comparative tables are also shown in European currency units (ECU).

These units of value are explained in the following chapter.

4. TARIFF VOLTAGE

The voltage at which electricity is supplied to the consumer is an element which may affect the industrial price levels. The higher the voltage, the lower the price. But in this case, the consumer has to bear the expense of the electricity transformer (the investment cost or the rental).

In practice the supply voltages vary according to the grid and the tariffs. According to our general definitions, the voltage taken into account is the one at which electricity is commonly supplied to the consumer.

Where several supply voltages coexist for the same category of users it is the most representative (greatest number of users) which is considered.

The table below gives the tariff voltages according to which the prices for the industrial standard consumers have been calculated.

Voltage applied to industrial standard consumers

Standard consumers	I _a	I _b	I _c	I _d	I _e	I _f	I _g
FR of Germany							
- Süd Gebiet	← 0.38 →			← 20 →			
- Hamburg, Hannover, Düsseldorf, Frankfurt	← 0.38 →			← 10 →			/
- West Gebiet Stuttgart, München			10				/
France	← 0.38 →			← 15 →			40-130
Italy	0.38			← 50 →			
Netherlands							
- GEB	← 0.38 →			← 10 →			25
- PNEM, PEN	← 0.38 →			← 10 →			
Belgium				← 10/15 →			
Luxembourg				← 10/15 →		← 65 →	
United Kingdom	← 0.415 →			← 11 →			
Ireland	← 0.38 →			← 10 →		← 38 →	
Denmark	← 0.40 →			← 10 →		← 10 →	
Greece	← 0.38 →			← 6.6 →		20	22

III. UNITS OF VALUE

To permit comparisons between countries, prices expressed in national currencies need to be converted to a common unit. In this study two common units are used:

- (i) the European currency unit (ECU);
- (ii) the purchasing power standard (PPS).

1. THE EUROPEAN CURRENCY UNIT (ECU)

The ECU is a basket-type currency unit based on the market exchange rates of a certain amount of each of the Community currencies, weighted according to the gross national product and intra-Community trade of each Member State.

In 1984, this weighting was revised on the accession of Greece.

The new composition of the ECU basket is as follows:

DM	0.719	LIT	140
FF	1.31	DKR	0.219
HFL	0.256	IRL	0.00871
BFR	3.71	UKL	0.0878
LFR	0.14	DR	1.15

The conversion rates for the ECU against the national currencies in January of each year are given in a table in the statistical annex.

The definition of the ECU is such that it reflects fluctuations in exchange rates and is suitable for measuring the prices and values of international flows of goods and services. Data expressed in ECU therefore permit the comparison of prices in terms of money as changed at a bank. Such currency conversion at the market exchange rates, however, has the disadvantage that it fluctuates in time under the influence of many factors which are independent of internal price movements:

- (i) capital transfers;
- (ii) political decisions;
- (iii) regulations;
- (iv) speculation;
- (v) psychological factors;
- (vi) interest rates.

Furthermore a national currency can be overvalued in relation to its true purchasing power.

The ECU also has the inconvenience that its definition changes when a new currency is introduced, as is the case with the introduction of Greece, and that it is not coherent with the gross domestic product price index which makes it difficult to deflate.

To remedy these shortcomings it is necessary to calculate the true purchasing power of each currency which leads us to the notion of the purchasing power standard.

2. THE PURCHASING POWER STANDARD (PPS)

The PPS is a reference unit so calculated that its value in relation to the various national currencies is proportional to the purchasing power parities (PPP) between these currencies.

The purchasing power parities reflect the ratios between price levels in the different countries. The ratios between the prices expressed in national currencies are calculated for each of the products included in the uses of the GDP. If these ratios are suitably weighted, one obtains mean price ratios, the most general of which is the mean calculated for the GDP and known as the PPP at GDP level.

Such parities would be adequate to express all the data in real terms in the currency of any one of the countries considered. The method ensures that they are transitive and unaffected by the country chosen as a basis of reference. For Community calculations another reference unit known as the PPS is used. It is defined by applying the price ratios to the GDPs of the various countries expressed in national currency and adjusting the parities so that the value of the GDP of the Community as a whole in 1975 is identical whether expressed in ECU or PPS. Only the proportion accounted for by each country will be different.

When prices are converted to PPS using the GDP parity, the result may be interpreted as follows:

If one gigajoule of energy costs 10 PPS in country A and 5 PPS in country B, this means that after allowance has been made for the differences between the general level of prices in the two countries, this gigajoule of energy is twice as expensive in country A as in country B.

This conclusion is independent of market exchange rates, which are influenced by factors other than the level of prices (movements of capital, speculation, interest rates, political decisions, etc.).

The conversion rates for the years covered by the study are given in a table in the annex. They were revised when the base year was changed.

3. PRICES IN CURRENT PPS AND CONSTANT PPS

The price surveys required to calculate purchasing power parities are not carried out every year. The most recent available is that for 1980 and another is planned for 1985. Since the parities are price ratios, however, their value for the other years may be estimated by extrapolation using the movement of the GDP price indices for the various countries, referred to the Community average. These are known as 'current parities'.

The data can also be converted into base year PPS. If price series deflated by the GDP price index for each country are expressed in base year PPS, one obtains an indication of the change in prices for the product in question in relation to the general level of prices in the country. The data so calculated can also be compared between countries, giving the same results in relative terms as will be obtained using current prices and current PPP, since the latter are extrapolated using the same indices, viz. the GDP price indices for each country and the average Community index.

Calculation using deflated PPS is thus carried out as follows:

- (i) the prices of the time series in current national currency are divided by 100th of the GDP price index of each of the years concerned;
- (ii) this deflated series is converted to PPS using the conversion factor of the base year 1980.

4. PRICE SERIES

In the light of the foregoing, the results of this survey of Community prices are given in three forms:

- (i) a series of current prices in the national currency for each country;
- (ii) a series in current ECU using the conversion rates for January of the year concerned;
- (iii) a series in 'deflated' PPS (base year 1980), which allows prices to be compared for different times and places.

IV. TAXATION

In the Community, sales of electricity are subject to a general indirect tax:

- (i) value-added tax (VAT) in nine countries (two having a zero rate);
- (ii) turnover tax in one country (Greece).

Furthermore, specific taxes are levied in four countries.

The prices inclusive of all taxes shown in this study comprise all the taxes mentioned above. In the tables in the annex, the amount of any specific taxes can be calculated from the difference between the tax-exclusive and VAT-exclusive price, while the difference between the total tax-inclusive price and VAT-exclusive price gives the amount of value-added tax¹ in national currencies per kWh.

1. GENERAL INDIRECT TAX

In general, VAT is calculated and applied to the price excluding VAT but including any specific taxes, these being part of the basis of assessment. France constitutes an exception since VAT is computed on the price excluding specific taxes.

The rates are as follows:

Value-added tax on electricity sales

(% of price before VAT)

January	1980	1981	1982	1983	1984	1985
FR of Germany	13	13	13	13	14	14
France ¹	17.6	17.6	17.6	18.6	18.6	18.6
Italy (domestic)	6	8	8	8	8	9
Italy (non-domestic)	14	15	15	18	18	9/18
Netherlands	18	18	18	18	19	19
Belgium	16	16	17	17	17	17
Luxembourg	5	5	5	5	6	6
United Kingdom	0	0	0	0	0	0
Ireland	0	0	0	0	0	0
Denmark	20.25	22	22	22	22	22

¹ On prices without taxes.

¹ Turnover tax for Greece.

Turnover tax on electricity sales

January	(% of price before tax)					
	1980	1981	1982	1983	1984	1985
Greece (domestic)	8	8	8	10	10	10
Greece (non-domestic)	0	0	0	0	0	0

In Italy, the new VAT rates depend on the activity; 9% for the extractive and manufacturing industries, including printing and publishing, and 18% for other non-domestic activities.

VAT is deductible for industrial and commercial consumers coming under the normal taxation system.

2. SPECIFIC TAXES

(a) Federal Republic of Germany

Since 1 January 1975 a compensatory tax (Ausgleichsabgabe) has been levied to promote the use of Community coal in power stations.

The rates depend on region and period as follows:

	(% of price before tax)					
	1980	1981	1982	1983	1984	1985
Hamburg	5.1	5.1	4.7	3.8	3.9	3.9
Hannover	4.3	4.2	4.0	3.3	3.4	3.4
Düsseldorf	5.3	5.3	4.8	4.0	4.0	4.0
Western Zone	5.3	5.3	4.8	4.0	4.0	4.0
Frankfurt/Main	4.1	4.0	3.8	3.2	3.2	3.3
Stuttgart	4.0	4.0	3.7	3.1	3.2	3.1
München	4.0	4.0	3.9	3.2	3.2	3.3
Southern Zone	4.0	4.0	3.9	3.2	3.2	3.3
Federal average	4.5	4.5	4.2	3.5	3.5	.

(b) France

Sales of low-voltage electricity are subject to municipal and departmental taxes. The rates applied in the cities surveyed were as follows for 1978-1984:

(%)

Places	Municipal tax	Department tax	Total
Lille	8	1	9
Paris	13.2	-	13.2
Marseille	8	4	12
Lyon	8	-	8
Toulouse	8	2	10
Strasbourg	0	4	4

These taxes were levied on 80% of the total bill excluding VAT and do not enter into VAT assessment. However, changes are being made to the taxable amount and the new system will be described in the next study.

(c) Italy

Electricity consumption is subject to a State tax (imposta erariale), the rates of which have been as follows since 1981:¹

(LIT/kWh)

Users	Northern and central Italy	Southern Italy and islands
Domestic	1.10	0.55
Non-domestic		
Blocks of consumption		
≤ 200 000 kWh/month	1.10	0.55
> 200 000 kWh/month	0.65	0.325

Certain types of consumption are exempt from this tax: electro-chemical, electro-metal-lurgical, public lighting, railways.

¹ A more complicated system was in force before 1981.

Furthermore, at the end of 1982 local taxes were introduced as follows:

(LIT/kWh)

Users	Municipalities			Provinces		
	1983	1984	1985	1983	1984	1985
Domestic for the block > 900 kWh/month	10	11	12	-	-	-
Non-domestic < 1 000 kWh/month	4	4.5	5	4	4.5	5

All these taxes enter into VAT assessment.

(d) Denmark

A special government tax on electricity was introduced in April 1977, the rates of which were as follows:

1.1.1980 - 29. 6.1980	8 Øre per kWh
30.6.1980 - 14. 6.1982	12.50 Øre per kWh
15.6.1982 - 31.12.1982	14.30 Øre per kWh
1.1.1983 -	15.50 Øre per kWh.

This tax is included for VAT assessment and is deductible in the same way as VAT, in other words, tax is only payable once in the event of resale.

(e) Greece

Since 1984, stamp duty of 1.2% is applicable to the tax-free price of domestic electricity. This duty is taken into account in calculating turnover tax.

V. ELECTRICITY PRICES IN THE VARIOUS COUNTRIES

1. FR of Germany
2. France
3. Italy
4. Netherlands
5. Belgium
6. Luxembourg
7. United Kingdom
8. Ireland
9. Denmark
10. Greece

1. FR OF GERMANY

(a) Situation in the electricity industry

There are around 1 000 electricity distribution enterprises in the FR of Germany. About 340 of these enterprises have their own generating capacity while the others are solely retailers. The enterprises are of varying size and legal form. This decentralized system leads to, insofar as interests us here, a great diversity of prices reflecting the nature of each zone.

Three pricing systems are to be found:

- (i) the tariffs applied to small low voltage consumers which must be published by the seller and contain an obligation to supply according to the 'Law on energy';
- (ii) the quasi-tariffs, principally for supplies in low voltage for storage heating (households, shops, offices, etc.) which take the form of non-published agreements;
- (iii) individual contracts cover all other cases, notably for supplies to industry and are negotiated between the parties concerned. Often the contracts offer the same price to all clients having similar supply conditions.

The following table which shows the sales of electricity by the public distribution enterprises in 1983 broken down by sector and contract type illustrates the pricing system operated:

Sector	Tariffs and quasi-tariffs	Individual contracts		Total
		Low voltage	High voltage	
Households	90 165 ¹	-	-	90 165
Commerce and small industry	24 365	4 534	8 835	37 733
Agriculture	6 890	196	211	7 297
Public administration	2 108	3 710	16 040	21 858
Public lighting	1 088	1 546	-	2 634
Transport	51	314	4 138	4 503
Industry	381	4 993	125 597	130 971
Total	125 048	15 293	154 821	295 161

¹ Of which 18 030 GWh for storage heating, with quasi-tariffs.

At the end of 1983 the consumers supplied by the public distribution network were made up as follows:

Users	1 000 n	%	Standard consumers
Households	25 834	87.1	D _a D _e
(of which, heating)	(1 890)	(6.3)	
Commerce, administration, small industry	2 963	10.0	I _a I _b
Industry	204	0.7	I _c I _g
Agriculture	655	2.2	
Total	29 656	100	

The eight distribution network chosen for this study are amongst the largest and represent 53% of electricity sales in the FR of Germany.

To meet these needs the following energy sources are used in the public power stations:

Sources	(%)	
	1980	1984
Hydroelectric	5.3	4.7
Nuclear fuels	14.4	27.9
Coal	26.5	30.5
Lignite	30.1	27.0
Fuel-oil	5.0	1.1
Natural gas	17.4	7.6
Derived gases	0.8	0.4
Other	0.4	0.8
Total	100	100

(b) Taxes

Sales of electricity are subject to value-added tax (VAT) the rates of which were as follows on the VAT excl. price:

13% since 1.7.1979;
14% since 1.7.1983.

VAT is deductible for commercial and industrial consumers.

In addition, since 1 January 1975 a compensatory tax (Ausgleichsabgabe) has been levied on electricity sales with the object of increasing the use of Community coal in the power stations. The rates are revised periodically, in general once a year and since 1978 the have differed according to Federal region.

At the beginning of each year the rates were as follows in the regions chosen for our study:

	(% of price before tax)					
	1980	1981	1982	1983	1984	1985
Hamburg	5.1	5.1	4.7	3.8	3.9	3.9
Hannover	4.3	4.2	4.0	3.3	3.4	3.4
Düsseldorf	5.3	5.3	4.8	4.0	4.0	4.0
Western zone	5.3	5.3	4.8	4.0	4.0	4.0
Frankfurt/Main	4.1	4.0	3.8	3.2	3.2	3.3
Stuttgart	4.0	4.0	3.7	3.1	3.2	3.1
Munich	4.0	4.0	3.9	3.2	3.2	3.3
Southern zone	4.0	4.0	3.9	3.2	3.2	3.3
Federal average	4.5	4.5	4.2	3.5	3.5	.

This tax is included in the basis of assessment to VAT.

(c) Household prices - tariffs

The legal relationship between the distributors and households or other tariff clients is governed by:

- (i) the regulation on general conditions for the supply of electricity to tariff consumers, in force since 1 April 1980 and replacing previous texts;
- (ii) several supplementary conditions issued by the distributors;
- (iii) the general tariffs.

All these regulations, conditions and tariffs are published. By virtue of these the distributors are obliged to connect clients to the grid and to supply electricity.

The pattern of the general tariffs is determined by 'the regulation on general tariffs for electricity supply (Federal regulation on tariffs)' - BTO elt - of 26 November 1971, updated on 30 January 1980. This regulation does not apply to electricity supplied by virtue of special arrangements at special prices e.g. for storage heating, as these are governed by non-tariff contract arrangements. There is a uniform structure of general tariffs for low voltage supply, the pattern being fixed by the Federal regulation on tariffs BTO elt.

All distributors must offer their customers a choice of four tariffs (an exception being block tariffs) of which:

- (i) two basic two part tariffs, called I and II with different commodity rates, the lower one (tariff II) having a higher standing charge;
- (ii) a small users tariff;
- (iii) an off-peak tariff which is always combined with one of the preceding tariffs.

Most customers are covered by the basic tariffs consisting of an annual standing charge and a charge per kWh consumed. The standing charge covers the connection charge and meter reading.

The connection charge, which usually accounts for the bulk of the standing charge, depends on the type of use: domestic, agricultural, commercial, professional and other. In the case of domestic uses, the number of rooms used or usable for accommodation is the yardstick (the annexes, i.e. corridor, bathroom, toilet, boxroom, are not counted; nor are rooms of less than 6 m²). In the case of rooms of over 30 m², the equivalent of an additional room is counted for each extra 30 m² or part thereof. An extra charge may be made above a given level of power, and also when heating or air-conditioning appliances are used, irrespective of their period of use. The use of such appliances is a function of climatic factors, unlike other domestic appliances, and they are switched on simultaneously by a large number of consumers (whence the danger of overloading the grid).

In the case of households heated by electric heat pumps no supplement is payable if the heating system can be switched to another fuel or if the heat pump is interruptible for pre-determined daily periods.

The invoicing and meter reading charges cover the meter and the costs incurred by the company in invoicing and collecting: it depends on the type and the size of the meters.

For the application of tariff II, with a lower commodity rate, thus better suited for large consumptions the degressivity of the unit price is limited by the commodity rate of tariff I to ensure rational and economic energy use. Above a certain ceiling, each supplementary kWh is charged at a rate which is at least 3 Pf above the commodity rate of tariff I (without the standing charge).

Separately metered electricity for heat pumps is excluded from the calculations.

When consumption is very low in relation to the size of the installation, the small users tariff is advantageous. This tariff consists of a meter reading charge and a commodity rate which is higher than the basic tariff to cover overheads. This tariff is seldom advantageous for households.

The off-peak tariff offers a price per kWh which is lower than tariff II. It may be taken in conjunction with the other tariffs. A separate meter is necessary to measure night consumption (off-peak hours) for which an additional standing charge is payable. The off-peak periods are of 6-8 hours duration depending on the load curves of the distributors.

In addition to the general tariffs companies usually offer special arrangements for storage heating (and sometimes large storage water-heaters) with prices per kWh even

lower than those charged for off-peak electricity. These special rates are offered when capacity is released during off-peak hours, according to load curves and local conditions, so that electricity can be supplied without requiring additional investment in the installations. However, certain technical conditions have to be satisfied and there is therefore no obligation to supply in this case.

Example of general tariff available in Frankfurt/Main in 1985.

Standard consumers	Tariff	Standing charges		Commodity rate DM/kWh
		Meter	Connection	
D _a	I	7.80 (3)*	3.50 ^a	0.175
D _b	I	9.40 (4)*	3.50 ^a	0.175
D _c	I + off peak	11.00 (5)*	7.50 ^b	day 0.175
			1.10 ^c	night 0.108
D _e	II + Contract	20.40 (6)*	7.50 ^b	day 0.145
			1.02 ^c	night 0.066 ^d

^a Single AC meter.

^b Double meter.

^c Supplement for total recorder.

^d Storage heating contract.

* No of rooms for tariff purposes.

(d) Household prices - analysis

The results are shown in Tables 1-4 in the annex.

During the period 1980-85 current prices including all taxes rose by between 30% and 55% according to region and standard consumer. This results principally from the rising cost of fuels used in electricity generation (95% of electricity is of thermal origin). Taxes have hardly played any part, while VAT rose by one point during 1983 the compensatory tax fell slightly in the same period. Taxes have consistently remained around 15% to 16% of the selling price.

Consumers using electricity for heating, charged according to quasi tariffs have suffered the largest rises in all cases (40-55% for D_e between 1980 and 1985).

This has resulted in a diminution of the range of unit prices between small and large users. However the gap remains wide: the standard consumer D_e (20 000 kWh, of which 15 000 night) pays in general 67-74% less per kWh than the standard consumer D_a (600 kWh). It is true to say however that the latter represents a very small part of the domestic sector in the FR of Germany.

The tendency towards increases is not regular in time, the year 1982 marks a mid point with a small but short-lived falling back of price levels.

The range between extreme prices in the eight locations surveyed varies from 13-44% according to the level of consumption in 1985. This regional dispersion is more pronounced for 'heating' users (D_e) than for the small consumers (D_a , D_b) and has grown since 1980. This is due to the independence of companies who liberally establish their tariffs based on their costs.

This creates a difficulty in selecting a location which typifies the level and evolution of prices in Germany. One solution seems to be to calculate a median price from the eight locations surveyed for each year and standard consumer. This exercise, which confirms our earlier remarks gives the following results:

Median price

Standard consumers							(Pf/kWh)
	1980	1981	1982	1983	1984	1985	% 1985/80
D_a	34.39	37.73	43.55	44.36	45.89	46.40	+ 35
D_b	26.07	28.96	33.15	33.67	35.14	35.68	+ 37
D_c	18.92	20.41	23.56	24.57	25.44	26.08	+ 38
D_e	9.56	11.24	13.26	13.41	14.14	14.33	+ 50

In addition for the whole period and all standard consumers it is Düsseldorf which shows the smallest deviation from the median prices and has thus been chosen as the most representative.

Since 1980 the price of electricity for domestic uses has grown by significantly more than the price of all goods and services represented by the implied GDP price index which itself has grown by 17%.

In conclusion it can be said that electricity has, in all cases become more expensive in 'constant' terms.

(e) Industrial prices - tariffs

The legal relationship between distributors and non-tariff customers is governed by individual delivery contracts concluded between the parties (general conditions are usually drawn up separately).

Standard contracts are offered for demands which can be supplied in medium voltage (up to 20 kV) with terms and price arrangements which are the same for each enterprise concerned. This does not mean that customers may not be offered a choice of two or three

price formulas for these standard contracts. Such contracts are subject to the terms of the Law on the general conditions of commerce (AGB) of 9 December 1976 (BGBl. I p. 3317).

The structure of the price formula for medium and high voltage is fairly uniform in the Federal Republic of Germany. All distributors offer a price formula with differentiated power charges and kWh prices for day and night. Some companies offer a block formula for a low load factor involving no power charge, but with nonetheless two tariff periods.

The majority of distributors offer degressive formulae alongside block tariffs. In most regions customers served in middle voltage can choose between two or three price formulas with different degressivity best suited to their load factor.

The parameter for calculating the demand charge is as a rule the maximum subscribed demand usually based on an annual demand consisting of the average of the two or three highest monthly demand levels (in kW or kVA). The demand considered is usually measured on a quarter-hourly basis. Most formulas provide for a minimum charge which is payable according to the demand available. Some price formulas provide for a rebate based on load factor. Certain distributors base the demand charge on the maximum demand requested by the user in the contract with a surcharge if this is exceeded.

The duration of tariff periods depends on the load pattern for each network. As a result the off-peak period is often longer in summer than in winter, but it will be at least 10 p.m. to 6 a.m. with many companies offering longer periods.

Those customers who can erase part of their demand during peak periods determined by the distributor can benefit from more advantageous rates, which reduce their costs. This possibility is becoming rare as network load patterns become more regular.

Block tariffs are also available with a decreasing commodity rate as consumption increases and a rebate for a low load factor depending upon the annual quarter hourly maximum demand. The off peak hours are the same as for the other price formulae. These systems are becoming infrequent.

In general contracts are based on $\cos \varphi \gg 0.9$. In the most common case where the demand is measured in kW a penalty is charged if the ceiling for reactive energy is exceeded.

On the contrary, if the demand is measured in kVA the consumer must endeavour to reach this ceiling in their own interest.

(f) Industrial prices - analysis

The results for the eight locations surveyed are shown in Tables 5-8 in the annex.

It should be noted that the analysis is based on the price excluding VAT but including the compensatory tax.

Between 1980 to 1985 current prices for users receiving electricity under individual contracts rose by 20-40% according to the location and level of consumption. A certain parallelism is seen between standard consumers with however rises being a few percent higher for very large users.

The rises have been softened by the policy of reconversion from petroleum products and natural gas to coal.

The movements are irregular in time:

- (i) large rises until the end of 1981;
- (ii) a falling back in 1982 or 1983:

- (iii) return to rising prices during 1983;
- (iv) quasi-stability in 1984.

Everywhere the difference in price between January 1984 and January 1985 is very small (a few percent) or even nil.

This pattern has affected all levels of consumption to the extent that unit price depression as a result of demand and consumption has hardly changed. For the period as a whole and all locations surveyed it can be said that a large industry (10 million kWh/year, 2 500 kW) pays half the price of a small industrial or commercial user (30 000 kWh/year, 30 kW).

The upward trend has not been parallel between locations because tariff changes do not always occur at the same time or with the same frequency. This leads to a constantly changing order of locations. As a result it is difficult to choose a location which would be representative of the level and evolution of prices in Germany. One solution is to calculate a median price from the eight locations surveyed for each standard consumer. This gives the following results:

Standard consumers	<u>Median price</u>						(Pf/kWh)
	1980	1981	1982	1983	1984	1985	% 1985/80
I _c	20.20	21.84	25.32	25.27	25.32	26.12	+ 29
I _d	16.05	17.34	20.40	20.26	21.00	21.10	+ 31
I _e	13.23	14.54	16.63	16.68	17.45	17.50	+ 32
I _f	12.63	13.73	15.87	16.35	17.09	17.10	+ 35

Due to a lack of price information we have not calculated a median price for the standard consumers I_a, I_b and I_g.

Evidently prices will be found above and below the median as regional price ranges have remained open during the whole period studied. Regional price differences are greater for the small consumers (35% between extreme prices for I_c) than for the large consumers (18% for I_f). These differences result from the liberty of the distribution companies to establish their tariffs based on costs.

For international comparison we have chosen Düsseldorf to represent Germany to ensure harmonization with household prices and other sources of energy (gas prices for example). For industry this choice has the effect of underestimating the price of electricity in Germany as the prices for Düsseldorf are below the median.

A comparison between the price of all goods and services and the price of electricity shows that the latter has become more expensive. Between 1980 and 1985 the implied GDP price index only rose by 17% in Germany.

2. FRANCE

(a) Situation in the electricity industry

A nationalized public company (EDF) dominates the production, transport and distribution of electricity.

EDF has the right to decide on tariffs and prices. The prices shown in this study are valid for practically the whole country.

EDF serves 25 210 000 customers (out of a total of 26 680 000 in France), 168 000 receiving a high-voltage and 25 041 000 a low-voltage supply. At the present time, 2 million dwellings have integrated electric heating.

Sales were divided up as follows in 1984:

	(% GWh)		
Users	EDF	Other distributors	Total
<u>Low voltage</u>	<u>40.3</u>	<u>2.4</u>	<u>42.7</u>
- Households (of which off-peak tariffs)	30.2 (8.6)	1.8 (0.5)	32.0 (9.1)
- Professional uses	8.9	0.5	9.4
- Public lighting	1.2	0.0	1.3
<u>Middle and high voltage</u>	<u>55.6</u>	<u>1.7</u>	<u>57.3</u>
- Industry	41.6	1.3	42.9
- Railways	2.9	0.0	3.0
- Tertiary and professional sectors	10.3	0.4	10.7
- Agriculture	0.7	0.0	0.7
Total	96.0	4.0	100

FRANCE

The breakdown of domestic subscribers (EDF) is as follows:

Categories kWh/year	% n	% GWh	Standard consumers
< 1 000	27.8	4.3	D _a
1 000 - 2 000	25.1	11.9	D _b
2 001 - 5 000	30.8	30.6	D _c
5 001 - 10 000	9.6	21.5	D _d
> 10 000	6.7	31.7	D _e
Total	100	100	

Net production of the public services comes from the following sources:

Sources	(%)	
	1980	1984
Hydroelectric	30.9	23.1
Nuclear	26.9	64.2
Solid fuel	21.2	10.5
Petroleum products	18.4	1.2
Natural gas	1.8	0.5
Manufactured gas	0.8	0.5
Total	100	100

(b) Taxation1. Value-added tax

All supplies of electricity are liable to VAT, calculated on the tax-exclusive price, the rate being 18.6% from 1 July 1982 and 17.6% before. VAT is deductible for industrial and commercial consumers who have opted for the general VAT scheme.

2. Local taxes

The basis for the assessment of local taxes on electricity supplies was modified by the law of 29 December 1984; in practice, however, this change did not come into effect before March 1985. The figures given in this study up to the beginning of 1985 thus come under the old system which can be summarized by the following table (applicable to the whole period studied):

(%)			
Cities	Municipal tax	Departmental tax	Total
Lille	8	1	9
Paris	13.2	-	13.2
Marseille	8	4	12
Lyons	8	-	8
Toulouse	8	2	10
Strasbourg	-	4	4

These taxes are applied to 80% of the tax-exclusive price of low-voltage supplies (i.e. standard consumers D_a to D_e). They are not considered for VAT assessment.

(c) Household prices - tariffs

The 'blue' tariff introduced after the revision of the tariff system is still in effect, though it was modified on 15 February 1984 (valid in January 1985).

This tariff is made up of simple two-part formulae comprising:

- (i) a rental which increases with the amount subscribed to;
- (ii) a single commodity rate, with an option as regards 'off-peak hours'.

This tariff is applied to domestic and agricultural customers whose requirements are below 36 kVA.

FRANCE

The rates are as follows:

Standard consumers	Subscribed demand kVA	Yearly rental FF/year	Energy price c/kWh
D _a	≤ 3 ¹	131.04	58.86
D _b	3	163.20	54.45
	6	417.00	48.07
	9	769.20	48.07
	12	1 117.32	48.07
	15	1 465.44	48.07
	18	1 813.56	48.07

¹ 'Small supplies' tariff.

Off-peak hours option

Standard consumers	Subscribed demand kVA	Yearly rental FF/year	Energy price c/kWh	
			Peak hours	Off-peak hours
D _c	6	677.40	48.07	27.59
D _d	9	1 092.00	48.07	27.59
	12	1 521.48	48.07	27.59
	15	1 950.96	48.07	27.59
D _e	18	2 380.44	48.07	27.59
	24	3 579.24	48.07	27.59
	> 24	+ 199.80 ¹	48.07	27.59

¹ For each supplementary kVA.

The tariff for small supplies is intended to protect the least-favoured social groups.

The off-peak hours option is interesting for storage heaters. There is also an 'erasable peak day' option which is not described here as it is now little applied.

For more details, see the preceding study Electricity prices 1978-1984, ISBN 92-825-5166-0.

This tariff system is characterized by a progressive fixed charge rate which is more than proportional to demand (14 times more expensive when demand increases six times) and by a low price for off-peak hours (- 43%). The aim is to encourage the consumer to spread out his consumption more favourably.

(d) Household prices - analysis

The results are shown in Tables 9-11 in the annex. As there is a standard national tariff, the tax-exclusive price is the same at all locations. On the other hand, the price including all taxes differs from one place to another by virtue of the local taxes.

As, however, taxes are proportional, prices evolve in parallel at all places. There is thus no regional distortion in the rates of increase between 1980 and 1985.

The upward movement is mainly due to production and distribution costs; the tax burden has only gone up by 1 percentage point over the study period.

Nevertheless, the increases vary according to consumption levels; the more the latter rise, the greater the increase in current prices as illustrated by the following table:

Standard consumers kWh/year	1985/1980 %
D _a 600	+ 32
D _b 1 200	+ 52
D _c 3 500	+ 66
D _d 7 500	+ 69
D _e 20 000	+ 70

In fact, the whole system has generally been kind to the smallest consumers. This is particularly true of subscribers to the 'small supplies' tariff which was even reduced by 4% in 1984. In the same period, the other subscribers were faced with price increases of between 4 and 6%.

The result is a diminution of tariff depression; in 1985, standard consumer D_e pays 45% less for a kWh than D_a, whereas the reduction in 1980 was 57%. As the tariff formulae show, this reduction comes much less from off-peak consumption than from the rebate on quantities consumed.

As pointed out above, regional price differences are solely due to the tax system. The difference between the most expensive (Paris) and the least expensive city (Strasbourg) is 6%.

In addition the annexed tables show the divergent trends for small and large domestic consumers. For the small consumers (D_a , D_b), electricity prices go up slightly less slowly than the prices of all goods and services as reflected in the GDP index. In other words, electricity does not become dearer for them in real terms. It is even somewhat cheaper in 1985 than in 1980. The reverse holds true for the larger domestic consumers (D_c , D_d , D_e). The increase in real terms is even quite substantial for heating, and the result is likely to be a halt in the expansion of domestic heating by electricity.

(e) Industrial prices - tariffs

Tariffs were modified on 15 February 1984.

The new arrangements were still valid in January 1985 and comprise:

- (i) abolition of abatements on a demand basis;
- (ii) change of tariff periods;
- (iii) tariff standardization.

There are still three tariff families for professional and industrial uses:

Tariff	Application	Standard consumers
1. Professional	low voltage, demand < 36 kVA	I_a
2. Yellow	low voltage, demand 36-250 kVA	I_b , I_c
3. Green	medium voltage, demand > 225 kW	I_d , I_e , I_f , I_g

The professional tariff is as follows:

Demand kVA	Standing charge per month ¹		Commodity rate c/kWh		
	Without off-peak	With off-peak	First block ²	Surplus	Off-peak ³
6 - 24	10.92 FF/kVA	11.50 FF + 12.80 FF/kVA	54.16	48.07	27.59
> 24	18.60 FF/kVA	11.50 FF + 20.30 FF/kVA	-	48.07	27.59

¹ Increased by the following monthly amounts as a function of lighting power:

Demand (kVA)	3	6	9	12	15	18
FF/month	40.20	80.40	120.60	160.80	201.00	241.20

² The second block is 25 times the subscribed demand, rounded off in units of 3 kVA.

³ In principle, off-peak hours are 22-6 h.

The tariff periods have been standardized for the yellow and green systems. The summer now lasts seven months and the winter peak is recorded over three months instead of four.

The basic form of these two tariffs is shown in simplified form below:

Load factor	Annual standing charge	Commodity rate c/kWh				
		Winter			Summer	
		High peak	Peak hours	Off-peak hours	Peak hours	Off-peak hours
- Yellow	FF/kVA ¹					
> 4 000 h	353.26	/	60.33	26.15	18.41	9.79
≤ 4 000 h	116.62	/	86.63	37.37	19.80	10.23
- Green	FF/kW					
> 6 000 h	821.46	40.80	31.93	22.65	12.96	9.14
4 000-6 000 h	536.27	59.63	43.67	23.61	15.69	9.28
1 800-4 000 h	338.41	104.27	53.03	24.72	17.13	10.22
< 1 800 h	109.16	145.37	73.27	32.93	20.90	11.51
Reactive energy c/kVARH	Penalty = Bonus =	9.86 0.63	9.86 0.63	- -	0.85 0.35	- -

¹ Rounded up to multiples of 6 kVA up to 108 kVA and in multiples of 12 kVA beyond that.

FRANCE

Summer extends from April to October.

The winter peak covers two periods of two hours daily (9-11 h and 18-20 h) from December to February.

The off-peak hours comprise eight hours per day and the whole of Sunday.

Reactive energy is only calculated for the green tariff and does not give rise to any rebate unless $\text{tg } \phi = 0.6$. The standard consumers of this study hence receive a bonus of 11.57% on consumption outside the off-peak hours (since $\cos \phi 0.9$ gives $\text{tg } \phi 0.4843$ and $0.6 - 0.4843 = 0.1157$).

In order to calculate prices, one must have a complete breakdown of consumption between tariff periods. In view of the changes to these periods, the new system given below, resulting from the average distribution recorded in France, has been applied.

	(%)			
Load factor	1 000 h	1 600 h	2 500 h	4 000 h
Winter high peak	/	/	6.44	5.17
Winter peak hours	55.5	42.57	30.60	26.55
Winter off-peak hours	-	3.62	9.28	12.15
Summer peak hours	44.5	49.31	41.52	38.68
Summer off-peak hours	-	4.50	12.16	17.45
Total	100	100	100	100
Total peak hours	-	8.12	21.44	29.60
Sunday supplement	-	-	3.44	4.60

All these tariffs are standard for the whole of the metropolitan territory served by EDF with the exception of very high power requirements ($> 40\ 000$ kW) where regional differences occur but affect only a very small number of companies.

(f) Industrial prices - analysis

The results are given in Table 12 in the annex.

The prices are valid for the whole of the national territory, the only regional differences still in existence affecting a limited number of very large industrial consumers ($> 40\ 000$ kW) who are not covered by this study.

Between 1980 and 1985, the increases in current prices (excluding VAT) range from 58 to 99%, the largest consumers being at the lower end of the scale. Upward trends accelerated in the period 1981-83 but there was a slowing-down in 1984 when rates were around 5%.

The effect of the new tariff scheme can be seen from 1983. This favours consumption in off-peak hours, and the rates of increase for consumers covering a large amount of their requirements during these hours (I_c to I_g) are much more moderate than for the others.

Tariff degression clearly expands under these conditions. At the beginning of 1985, standard consumer I_g was paying 60% less per kWh than a small subscriber (I_a), whereas this reduction in unit price was 48% in 1980. The largest customer presented in this study (I_g), with an annual consumption of 24 million kWh, is close to the asymptote of the tariff curves. Indeed, an industrial company consuming five times more and accounting for a power of 25 000 kW would only pay 5% less in unit prices.

Over the period 1980-85, the cost of electricity increased faster than the cost of goods and services overall (57% increase in the GDP implicit price index), except for the very large industrial consumers (I_g for example), for whom tariff adjustments have just about compensated for inflation.

3. ITALY

(a) Situation in the electricity industry

The ENEL (Ente nazionale per l'energia elettrica) was established by the law of 6 December 1962 (No 1643) and is a public service responsible for the production, transport, distribution and sale of electricity. However, the sector is not fully nationalized as the law authorized three exceptions:

- (i) municipal undertakings existing before 1962, numbering about 150;
- (ii) self-producers, consuming at least 70% of their own production;
- (iii) small producers (less than 15 GWh/year).

Two further exceptions were allowed by a law in 1982 (No 308):

- (i) production from renewable sources;
- (ii) combined electricity-heat production in installations < 3 000 kW.

In addition ENEL has a coordinating and managing function for the whole electrical system of the country, including the activities of non-nationalized companies.

In practice, the current structure of production is as follows:

ENEL	82%
Municipal undertakings	4%
Small producers and self-producers	14%

The net production of electricity from public power stations comes from the following sources:

Sources	(%)	
	1980	1984 ¹
Hydroelectric	25.6	24.9
Geothermal	1.8	1.8
Solid fuels	9.4	15.0
Petroleum products	57.3	40.0
Natural gas	4.4	13.8
Manufactured gas	0.0	0.0
Nuclear	1.4	4.4
Other	0.1	0.1
Total	100	100

¹ Provisional.

ENEL's selling prices must conform to the directives of the Interministerial Price Committee (CIP). Tariffs are the same for the same type of consumer though there is a distinction between two large zones:

- (i) North and centre (Piemonte, Valle d'Aosta, Lombardy, Trentino-Alto Adige, Veneto, Friuli-Venezia Giulia, Liguria, Emilia-Romagna, Toscana, Umbria, Marche and a part of Lazio);
- (ii) South and islands (a part of Lazio, Abruzzi, Molise, Campania, Puglia, Basilicata, Calabria, Sicily and Sardinia).

Three quarters of total sales are in the northern and central zone.

The distribution of sales is as follows (1984 estimate):

	(% GWh)
Households	25
Industry	55
Commerce, offices	10.8
Public lighting	2
Railways	2.7
Resale distributors	4.5
Total	100

Household sales in 1984 were in the following blocks:

kWh/year	% n	% GWh
< 1 000	30.6	7.7
1 000 - 2 000	30.9	24.6
2 001 - 5 000	3.5	55.6
5 001 - 10 000	3.4	11.0
> 10 000	0.1	1.1

ITALY

(b) Taxation

(i) Value-added tax

The tax system was modified on 1 January 1985 by a law of 19 December 1984 (No 853). In particular, value-added tax rates were modified and standardized though there is a whole set of exceptions. VAT rates applied to VAT-exclusive electricity prices have evolved as follows:

Period	(%)	
	Domestic	Non-domestic
1.12.1977 - 31.12.1980	6	14
1. 1.1981 - 30. 9.1982	8	15
1.10.1982 - 31.12.1984	8	18
1. 1.1985 -	9	9 or 18

The normal rate of 18% has been applied to non-domestic uses since 1985 except for the extractive and manufacturing industries (including printing and publishing) which benefit from a reduced rate of 9%.

In this study, 18% has been counted for simplicity's sake for standard consumers I_a , and I_b and 9% for consumers I_c to I_g .

(ii) Treasury tax (imposta erariale)

This specific tax is levied on electricity sales on the basis of the following amounts which differ according to the consumer and zone:

Users	Period	(LIT/kWh)	
		North and centre	South and islands
Domestic	1978-1984	1.10	0.55
Non-domestic	since 1981 ¹		
< 200 000 kWh/month	since 1981	1.10	0.55
> 200 000 kWh/month	since 1981	0.65	0.325

¹ A more complex system existed before 1981.

Certain types of consumption are exempt from the 'imposta erariale', e.g. electrochemical and electrometallurgical consumption, public lighting and traction.

This tax is included in the basis of assessment of VAT and is taken into account in this study.

(iii) Local taxes

A law of 30.12.1982, modified on 27.12.1983 and 22.12.1984, allows:

- (a) local authorities to levy a tax on domestic consumption with the exception of the first 75 kWh/month for users having a demand up to 3 kW;

the rates have evolved as follows:

1983	10 LIT/kWh
1984	11 LIT/kWh
1985	12 LIT/kWh.

- (b) the local authorities and provinces to each apply a tax on all non-domestic consumption with a subscribed demand up to 1 000 kW;

the rates have evolved as follows:

1983	4 LIT/kWh
1984	4.5 LIT/kWh
1985	5 LIT/kWh.

These local taxes are included in the basis of VAT assessment.

As these local taxes have been collected by virtually all the local authorities and provinces since 1983, they are included in this study.

(c) Household prices - tariffs

The tariffs applied since the beginning of 1984 are still in effect, the only change consisting of an increase of 20.5% in the 'thermal' or fuel surcharge. For further details on tariff formulae, see the previous study Electricity prices 1978-1984.

(d) Household prices - analysis

The results are given in Table 13 in the annex.

Between 1980 and 1985, current selling prices increased by 124 to 170% depending on consumption level.

There are three causes:

- (i) increased cost of power station fuel (fuel surcharge on tariffs);
- (ii) tariff adjustment to take account of inflation;
- (iii) increased taxation, with a rise of three points in VAT and the introduction of local taxes in 1982.

The increases are somewhat lower in the northern and central zone. However, prices in the south and islands remain slightly lower, solely on account of the lower treasury tax since tax-exclusive prices are the same throughout the country because of the standard national tariff. The tax system is not neutral, as the burden increases with consumption. In 1985, it represented 10% of the price paid by a small consumer (D_a) and 16% for a large consumer (D_d).

The largest consumers have had to cope with the largest increases (170% since 1980) and also have to pay the highest prices. This is a specific characteristic of the 'progressive' tariff system. The more electricity consumed, the higher the unit price. At the present time, a customer consuming 7 500 kWh per year (D_d) pays twice as much per kWh as a small consumer using 600 kWh (D_a).

There are four reasons for this progressive price structure:

- (i) the standing charge increases more than proportionally to the quantities consumed; when consumption goes up six-fold (600 to 3 500 kWh per year), the standing charge increases fifteen-fold; for a twelve-fold increase, the standing charge is 33 times higher;
- (ii) the commodity rate is based on a progressive price block system;
- (iii) the fuel surcharge is higher above 3 kW;
- (iv) local taxes are not levied below certain demand levels (< 3 kW) and consumption levels (75 kWh/month).

The system results in two crucial thresholds: 900 kWh and 1 800 kWh per year. It is to the advantage of domestic consumers to keep their consumption below these levels.

Because of this progressive system and the absence of a night or off-peak hour tariff, it is not advantageous to use electricity for space heating. For this reason, all-electric heating is very rare in Italy. Electricity is unable to compete with natural gas or even heating oil.

No prices are thus given for standard consumer D_e .

Current prices for electricity for household uses have gone up more quickly since 1980 than those for all goods and services (cf. the GDP implicit price index). The discrepancy is less large for small consumers, a social category which has been partially protected. As this category forms the majority of the clientele, this takes on particular importance. The average consumption per household subscriber is moderate; currently 1 895 kWh per year, it is on the increase.

(e) Industrial prices - tariffs

Tariffs for non-domestic uses were modified by Regulation No 12/1984 of the CIP.

Two systems coexist:

- (i) one based on demand, but with a standard commodity rate (general tariff);
- (ii) the other, termed 'multi-period', with five price levels, depends on the season and the hour.

The first system can be summarized in a simplified table valid from 1 January 1985:

Load factor	Low < 750 h		Reduced 750-1 000 h		Normal 1 000-4 000 h		High > 4 000 h	
	LV	MV	LV	MV	LV	MV	LV	MV
Demand charge LIT/kW/month	2 980	2 480	4 390	3 640	7 900	6 770	11 010	9 330
Commodity rate LIT/kW/h								
≤ 20 kW	131.35	109	108.15	92.80	75.80	65.45	/	/
21 - 30 kW	/	/	108.15	92.80	75.80	65.45	/	/
31 - 100 kW	/	/	/	/	75.80	65.45	/	/
> 100 kW	/	/	/	/	60.35	51.75	51.40	44.60
Thermal surcharge LIT/kW								
≤ 500 kW	69.90	63.85	69.90	63.85	69.90	63.85	69.90	63.85
> 500 kW (1st block)	/	64.95	/	64.95	69.90	64.95	69.90	64.95
> 500 kW (surplus)	/	/	/	/	/	6	/	6
Standard consumers			I _a		I _b I _c I _d		I _e	

LV = low voltage (≤ 0.4 kV).

MV = medium voltage (> 0.4 kV ≤ 50 kV).

The way in which the demand factor is calculated and billed was explained in the previous study (Electricity prices 1978-1984), to which reference should be made as no change has occurred since.

The application of the commodity rate has simplified the demand blocks in comparison with the 1984 tariffs. This single commodity rate is now only divided up into four demand blocks.

Non-domestic subscribers living in the south and the islands, having a subscribed demand of ≤ 30 kW, are allowed 25% off the demand charge and the commodity rate.

CIP Regulation No 26/1984 modified the rates of the fuel surcharge and ways of calculating it. There are now two rates for consumers whose demand exceeds 500 kW, the first applying to a consumption block of 3 000 kWh x demand.

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The tariffs given above apply to a demand up to 2 000 kW.

For subscribers exceeding this amount, there is a tariff known as the 'multi-period' tariff which has different demand charges and commodity rates for each of five hourly/seasonal periods.

An extract from this tariff is given in the simplified table below which is valid from 1 January 1985:

Periods	Demand kW	High utilization		Very high utilization	
		Energy price LIT/kWh	Demand charge LIT/kWh/ year	Energy price LIT/kWh	Demand charge LIT/kWh/ year
Winter high peak	≤ 3 000		133 680		188 400
	3 001 - 10 000	94.45	108 240	76.40	163 080
	> 10 000		82 200		136 920
Winter peak hours		62.35	72 480	42.65	112 080
Summer peak hours		28.80	34 680	18.60	55 440
Winter off-peak hours		6.90	7 800	5.95	10 560
Summer off-peak hours		6.90	3 240	5.95	4 560
Standard consumers		I_f		I_g	

This tariff is for consumers receiving a medium voltage supply (≤ 50 kV). Lower rates are provided for high and very high voltage (> 50 kV).

The demand charge is that of the period in which the maximum annual demand was metered.

In this study it was considered that the maximum demand requirement of standard consumers was in the winter peak periods. In this case, the standing demand charge depends on the demand level. The breakdown of consumption by period is as follows (in percent):

Winter high peak	11.78
Winter peak hours	31.02
Summer peak hours	27.64
Winter off-peak hours	17.78
Summer off-peak hours	11.78

100

This corresponds to the average readings of subscribers to the multi-period tariff.

To this must be added the fuel surcharge calculated as for the tariff.

In summary, the most suitable tariff system for standard consumers in this study is as follows:

Standard consumers	Tariff	Demand	kW	Utilization	Voltage
I _a	General	Reduced subscription	30 x 0.81	Reduced	LV
I _b	General	Reduced subscription	50 x 0.81	Normal	MV
I _c	General	Increased subscription	105	Normal	MV
I _d	General	Reduced subscription	500 x 0.85	Normal	MV
I _e	General	Increased subscription	505	High	MV
I _f	Multi-period	Max. demand	2 500	High	MV
I _g	Multi-period	Max. demand	4 000	Very high	MV

It is in the interest of standard consumer I_c to subscribe to a demand level higher than the maximum demand in order to benefit from a lower price per kWh. The same applies to consumer I_e who can benefit from the reduced price block in respect of the fuel surcharge.

(f) Industrial prices - analysis

Table 14 in the annex summarizes the results.

As stated previously, the analysis refers to prices excluding VAT but including specific national and local taxes.

It is clear that the upward price trend continues. Between 1980 and 1985, current prices for large industrial customers (I_c, I_d, I_e, I_f and I_g) rose from 100 to 169%, the price for small commercial and industrial consumers (I_a and I_b) increasing even further. There are two periods in which the rates accelerated: in 1980 and 1982. These movements mainly follow the development of fuel costs (effect of the fuel surcharge on the tariffs).

Unlike the situation with household prices, the rises here are less marked for large consumers. The result is an expansion of tariff degression. In 1985, a very large consumer (I_g) pays 47% less per kWh than a small consumer (I_a) as opposed to 30% less in 1980.

The tariffs are standard over the national territory with the exception of small non-domestic users whose demand does not exceed 30 kW; a rebate is accorded to those in the southern zone and the islands. This gives rise to regional price differences of the order of 20% in 1985. For other users, the difference between regions is minimal (0.5%) and derives exclusively from tax abatement. The tax system brings in another difference in favour of the largest industrial consumers ($> 1\ 000$ kW) who are exempt from local taxes (see results for I_f and I_g in the table).

The reduction in the number of blocks in the tariff has benefited the largest consumers. While standard consumers I_a , I_b and I_c suffered increases of 26% between 1984 and 1985, standard consumers I_d and I_e had only to pay 22 and 12% respectively. The largest consumers (I_f and I_g) are now billed in accordance with the new seasonal tariff which turns out to be advantageous for those who can concentrate their consumption on the off-peak periods.

Consumer I_g , for example, paid 5% less between 1984 and 1985. This shows ENEL's intention to equal out demand on the network by shifting major industrial consumption towards the off-peak periods.

Except for the largest industrial consumers, electricity prices are rising more rapidly than those of all goods and services (90% increase in the implicit GDP price index between 1980 and 1985).

This increase in 'constant' terms is felt particularly by the small commercial and industrial consumers.

4. NETHERLANDS

(a) Situation in the electricity industry

There are more than 90 companies operating in the electricity sector and these may be divided into three categories according to their activity:

- (i) producers;
- (ii) producer-distributors;
- (iii) resale distributors.

The producer-distributors provide three quarters of the electricity for the domestic market. The three companies surveyed are of this type and account for over 40% of the sales of electricity within the country.

All these companies have formed associations to ensure a certain cooperation. A reorganization is taking place following the report of the commission into the streamlining of companies in the public interest (Coconut) which will lead to greater harmonization.

The sales of electricity broken down by consumer sector in 1984 were as follows (provisional results):

	% GWh	Standard consumers
Households	28.5	D _a ... D _e
Agriculture	1.0	
Drainage, polders	0.7	
Public lighting	1.3	
Transport	2.0	
Commerce, services	23.8	I _a , I _b
Industry	42.7	I _c ... I _g
Total	100	

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All electricity is of thermal generation from the following energy sources (net production of the public services):

Source	(%)	
	1980	1984
Coal	11.7	26.9
Petroleum products	40.8	1.3
Natural gas	37.9	60.0
Derived gas	2.5	3.4
Nuclear fuel	7.1	6.6
Others	0.0	1.8
Total	100	100

(b) Taxes

Only value added tax (VAT) is levied on electricity sales at the following rates on the tax exclusive price:

18% until 31.12.1983

19% from 1. 1.1984.

VAT is deductible for industrial and commercial consumers.

(c) Household prices tariffs

While the association VEEN oversees tariffs generally and sets guidelines, each distributor is responsible for his own tariffs.

These must cover the costs of each enterprise taking account of the fact that price levels differ according to the region or municipality as a result of the different nature of the network and the consumer structure.

Low voltage tariffs are simple and of similar form:

- (i) Standing charge to cover general costs;
- (ii) two part commodity rate:
 - (a) basic price to cover the power supplied;
 - (b) fuel cost adjustment.

All tariffs are degressive as a result of quantities consumed. All companies offer a night tariff which for the payment of an additional standing charge affords a lower basic rate per kWh at night. The night tariff is offered for at least eight hours and is always combined with a day tariff.

The night tariff was applied to the standard consumers D_c , D_d , D_e .

(d) Household prices - analysis

The prices for the three zones surveyed are shown in Tables 15 and 16 in annex.

During the period 1980-85 current prices rose by between 25% and 40% according to region and level of consumption. However the evolution in time is not regular:

- (i) accentuated rises until 1982;
- (ii) slowing down, stagnation or slight fall in 1983-84;
- (iii) a few percent rise between 1984 and 1985.

This trend reflects, with a certain time lag the evolution of the average cost of fuels burnt in the power stations. This is the effect of the fuel cost adjustment provided in the tariffs.

The rises are more accentuated as consumption increases. This divergence in the price trend is brought about by the varying manner in which the tariff elements have evolved:

- (i) slight increase in the standing charge;
- (ii) large increase in day kWh rates;
- (iii) very large increase in night kWh rates.

As a result the larger consumers suffered the greatest increases (lower influence of the standing charge and larger night consumption). This has resulted in narrowing the price gap between small and large domestic consumers (attenuation of tariff degressivity curves). This does not prompt the use of electricity for central heating. Electric central heating is not very widespread in the Netherlands because natural gas is offered at a more attractive price: about three times cheaper per kWh in 1985 taking account of the differences in efficiency between the two systems.

Without prejudice to the range of extreme which can exist between regions or cities in the country as a whole one can nevertheless observe an important difference between the three large zones chosen for this study.

In 1985 these differences reached 19% for small consumers, 35% for medium consumers and up to 54% for electric central heating. Thus regional price differences are most striking for higher consumptions and have widened since 1980. In all cases it is North Brabant which is cheapest. The differences result from the independence of companies to formulate their tariffs based on their costs.

Since 1980 the price of electricity has risen faster than the price of all goods and services expressed by implied GDP price index (+ 18.7% between 1980 and 1985). In other words electricity has become more expensive even in 'constant' terms. The average consumption of electricity per household subscriber shows a slightly downward trend since 1980. This results from:

- (i) increased selling price in real terms;
- (ii) competition of natural gas;
- (iii) falling household incomes;
- (iv) use of more efficient appliances;
- (v) effect of energy economy campaigns.

(e) Industrial prices - tariffs

Small industrial and commercial consumers are supplied in low voltage and charged according to a simple two part tariff similar to that for domestic users. The standing charge is based on the size of the fuse and varies from 65 HFL per year for 25 amperes to 300 HFL for 80 amperes for example.

The border line between high and low voltage is not the same throughout (see supply voltage chart at the end of Chapter II). However in this study the prices have been harmonized to ensure an unbroken time series due to voltage (I_a, I_b always low voltage; I_c high voltage except Rotterdam; I_d, I_e, I_f, I_g high voltage throughout).

Large industrial consumers are charged according to tariffs which consist of:

- (i) a standing charge;
- (ii) a demand charge per kW;
- (iii) a commodity rate, in two parts:
 - (a) basic price;
 - (b) fuel cost adjustment.

The standing charge is around 800 HFL per year and covers the meter rental and administrative charges. The demand charge is calculated on the quarter hourly monthly maximum demand. The rate is doubled during the three winter months (December, January, February).

Certain distributors offer separate day and night kWh rates, with reduced tariffs between 23.00 h and 7.00 h. If $\cos \varphi < 0.85$ a penalty is payable. This did not affect the standard consumers of this study.

The tariff structure is recommended by VEEN but each distributor freely decides on the rates applied which are confidential.

The price of electricity for industrial users was strongly influenced by the cost of fuels. An indexed table allows us to look at how this aspect of the tariffs has evolved:

1980	1981	1982	1983	1984
100	136	132	129	129

(f) Industrial prices - analysis

The prices for the three zones surveyed are shown in Tables 17 and 18 in annex.

The period studied is characterized by rising prices though nevertheless hiding diverse movements according to the level of consumption, the region or the year.

The rises in VAT exclusive prices between 1980 and 1985 can be summarized as follows:

				(% 1985/1980)
Standard consumers	Rotterdam	North Holland	North Brabant	Voltage
I _a	19	60	23	LV
I _b	17	58	23	
I _c	18	43	25	HV
I _d	41	42	27.5	
I _e	49	43.5	30	
I _f	39	31.5	30	
I _g	31	34	27	

It is immediately obvious that price changes vary according to voltage with a clear distinction between low voltage (LV) and high voltage (HV).

Three phases can be seen in the price trend during the period studied:

- (i) rises until end of 1981;
- (ii) levelling off or increases during 1982 or 1983;
- (iii) moderate increases in 1984.

There are some exceptions, notably for low voltage in North Holland.

This trend reflects the cost of fuels burnt in the thermal power stations.

Degressivity curves remain reasonably stable in time and between companies. In general one can say that unit prices differ by a factor of one to two between extreme standard consumers (I_g, I_a).

Regional price differences have grown since 1980, being around 30% for low voltage (I_a, I_b) and often over 50% for high voltage (I_c ... I_g) in 1985.

While prices have not evolved similarly between regions, the lowest prices are always to be found in North Brabant. These differences result from the independence of the distributors to fix their tariffs according to their costs. This gives rise to great price dispersion according to consumers and regions.

With the exception of low voltage industrial and commercial users in Rotterdam the price of electricity has grown faster than the price of all goods and services represented by the GDP price index, which itself has grown by 18 to 19% since 1980.

5. BELGIUM

(a) Situation in the electricity industry

Under Belgian law, anyone is free to set themselves up as an electricity producer whether they be private individuals or companies, communes, provinces or the State itself. The communes have a unique right to use the distribution grid up to 1 000 kW, a right which they may concede to other bodies.

The law allows private companies or individuals to participate in intercommunal associations. This has led to the creation of numerous mixed intercommunales in which the public authorities and the private sector are closely associated.

This freedom has led to a very complex production and distribution system.

In fact there are 53 distributors of which:

Private concessionary companies	2
Local authorities	17
Intercommunales with private participation	24
Intercommunales without private participation	10

The whole is coordinated at national level, as if it were a single enterprise. This coordination is brought about by several distinct bodies, the most important of which are:

- (i) 'La Société pour la Coordination de la Production et du Transport de l'Energie Electrique (CPTE)' which runs the distribution centres;
- (ii) 'Le Pool des Calories et SYNATOM' which assures the supply to all power stations of fuel at a unified price;
- (iii) 'La Fédération Professionnelle des Producteurs et Distributeurs d'Electricité de Belgique (FPE)';
- (iv) 'L'Union des Exploitations Electriques en Belgique (UEEB)';
- (v) 'Le Comité de Gestion des Entreprises d'Electricité (CGEE)'.

The whole is supervised by the 'Comité de Contrôle de l'Electricité et du Gaz' whose object is to generate coordinated and unified management.

As far as prices are concerned, harmonization goes as far as the application of a standard national tariff.

The breakdown of electricity consumption by public consumers can be estimated as follows for 1984:

Users	% GWh	Standard consumers
<u>Households</u>	<u>28.1</u>	
of which {		
< 1 000 kWh	1.6	D _a
1 000 - 2 000 kWh	4.5	D _b
2 001 - 5 000 kWh	14.2	D _c
5 001 - 10 000 kWh	5.3	D _d
> 10 000 kWh	2.5	D _e
<u>Services, small industry</u>	<u>15.2</u>	I _a , I _b
<u>Industry</u>	<u>52.3</u>	I _c , I _d , I _e
of which {		
100 - 600 kW	8.2	I _f , I _g
601 - 1 000 kW	2.1	
1 001 - 4 000 kW	11.0	
> 4 000 kW	31.0	
<u>Public lighting</u>	<u>2.0</u>	
<u>Railways</u>	<u>2.4</u>	
Total	100	

The net production of electricity by public services is as follows:

Sources	(%)	
	1980	1984
Hydroelectric	0.6	0.7
Nuclear	25.4	54.8
Coal	24.7	29.1
Petroleum products	35.9	7.8
Natural gas	9.7	3.6
Manufactured gas	3.7	3.9
Other	0.0	0.0
Total	100	100

(b) Taxes

Electricity sales are subject to value-added tax. The rate was set at 16% of the tax-exclusive price from 1.1.1978 to 1.7.1981 and 17% subsequently. VAT is deductible for industrial and commercial consumers.

(c) Household prices - tariffs

Following a recommendation by the 'Comité de contrôle de l'électricité et du gaz', low-voltage tariffs were modified as of 1 January 1985. This covered the following points:

- (i) balancing out of the various terms of the tariffs;
- (ii) reduction in commodity charges for night consumption;
- (iii) extension of the favourable night tariff to day hours on Sunday, albeit with the possibility of interruptions of supplies;
- (iv) change in the weighting of the various indices to underline the influence of investment costs;
- (v) reduction of the social price, which is thus used more widely, and automatically applied to an annual consumption below 750 kWh;
- (vi) creation of an 'erasable' tariff for peak hours (interruptable supplies) as an option.

The new system is as follows:

Tariff	Standing charge BFR/year	Commodity rate BFR x kWh
Normal	$1\ 300 \times I_{ndb} \times N_{db}$	$1.994 \times I_{ndb} \times N_{db} + 0.685 N_c$
Social	-	$3.726 \times I_{ndb} \times N_{db} + 0.685 N_c$
Day-night	$1\ 300 + N_{ndb} \times N_{db}$ $+ 685 N_{db}$	day $1.994 \times I_{ndb} \times N_{db} + 0.685 N_c$ night $0.805 \times I_{ndb} \times N_{db} + 0.563 N_c$
Exclusive night	$685 N_{db}$	$0.591 \times I_{ndb} \times N_{db} + 0.563 N_c$
Erasable peak	$685 N_{db}$	$0.720 \times I_{ndb} \times N_{db} + 0.685 N_c$

Normal tariff

Based on an annual meter reading, this applies to standard consumer D_b in this study.

Social tariff

There has been no standing charge since October 1982. Raised to a consumption of 750 kWh/year, as opposed to 570 kWh before, it is now obligatory for standard consumer D_a .

Day-night tariff

Applies to consumers with a meter comprising clock and remote-control receiver, hence the higher standing charge. It is not advantageous for the standard consumers of this study.

Night-only tariff

Applies to appliances used exclusively at night and connected to a separate circuit. The night period is nine hours, fixed at the discretion of the distributor. This tariff is used to calculate the night consumption of standard consumers D_c and D_e in conjunction with the normal tariff for day consumption.

'Erasable peak' tariff

This is an optional tariff under the following conditions: appliances must be permanently and separately connected with separate metering; supplies may be interrupted by the distributor without warning; the daily duration of interruption is a maximum of 15 hours, normally from November to February; the duration of cumulative interruption is a maximum of 500 h/year.

As this tariff is new, it has not yet been widely applied.

All these tariffs are updated by means of a three-part index system:

$$(1) I_{ndb} = 1 + C \frac{P_n (C_n - C_c)}{\text{Reference cost}}$$

where C is the incidence, in the non-combustible part of the average low-voltage selling price, of the fixed capital cost of thermal power stations and

$P_n (C_n - C_c)$ is the surcharge resulting from investment in nuclear capacity.

The reference capital cost is the amount of depreciation incurrent on plants already in service.

The value of I_{ndb} was fixed at 1.081 following the commissioning of the nuclear plants Doel 3 and Tihange 2. This factor is revised whenever a significant addition is made to thermogenerating capacity.

$$(2) N_c = 1.2505 \frac{C_m}{70.403}$$

This index represents the development of fuel costs.

$$(3) N_{db} = (0.65 - 0.28\mu) + (0.3763 + 0.122\mu) \frac{S}{178.081} + 0.155\mu \frac{Mx}{949.40}$$

This index represents the evolution of the depreciation charges for the low tension distribution network.

where C_m : is the weighted average cost of nuclear and fossil fuels consumed (BFR/GJ);

s : basic salary of workers in the metal fabrication industry (BFR/hour);

M_x : represents the cost of building materials, metals and metal products.

μ : factor taking on the following values:

1.1.1982	=	0.05
1.1.1983	=	0.65
1.1.1984	=	0.80
1.1.1985	=	0.85
1.3.1985	=	0.90
1.5.1985	=	0.95
1.7.1985	=	1.00.

Indices N_{db} and N_c are revised monthly.

The value of these indices has been as follows:

January	I_{ndb}	N_c	N_{db}
1978	-	1.0378	1.0454
1979	-	0.9691	1.0661
1980	-	1.2890	1.1103
1981	-	1.7754	1.1353
1982	1.016 ¹	2.1488	1.2043
1983	1.049	2.4643	1.3128
1984	1.081	2.2893	1.4029
1985	1.081	2.3154	1.4841

¹ Introduced in October 1982.

(d) Household prices - analysis

The results are given in Table 19 in the annex.

The results show the general tendency towards an increase in current prices, with an accelerated movement in 1982 and a slowing-down from 1983. The increases between 1980 and 1985 range from 39 to 58% depending on consumption levels, the smallest consumers suffering the most moderate increases.

These rises result in the first instance from the increased cost of fuel used in power stations (+ 80% since 1980) and in the second instance from the rise in operating and

investment costs whose influence is becoming of greater weight. Another less important reason is the increase in VAT of 1% in 1981.

Three characteristics emerge from recent price developments between January 1984 and January 1985:

- (i) owing to a tariff modification, the price for the smallest domestic consumer (600 kWh per year) now depends on the social tariff. This leads to a reduction of 4%;
- (ii) on the other hand, larger consumers (D_b , D_c), taking most of their electricity during the day, have to pay 5% more;
- (iii) as the extreme case, the largest consumer (D_e), who uses electricity largely at night, is faced with a 1% increase only, this reflecting the advantageous tariff offered for off-peak hours.

This is a good summary of the new tariff approach which comes in turn from production and operating costs: greater price differences depending on the hour of day, with low night prices, and protection for the small consumers with modest income against the effects of the new tariffs.

Another consequence is that the prices paid by large domestic consumers with a partial night consumption (D_c , D_e) are lower than those of standard consumers I_a and I_b who represent professional consumers with daytime activity.

Despite the social tariff which puts a ceiling on prices, tariff degression is still very marked. For example, the reduction in unit price between consumption of 600 kWh/year in the daytime (D_a) and 20 000 kWh/year, mainly at night (D_e), was 60% in 1985 (64% in 1980).

During the period 1980-85, electricity prices has gone up faster than the price of all goods and services (32% increase in the implicit GDP price index), except for small consumers for whom electricity is hardly more expensive in 'constant' francs than in 1980.

(e) Industrial prices - tariffs

Following a recommendation by the Comité de contrôle de l'électricité et du gaz, tariffs were modified as of 1 January 1985. The changes covered the following points:

- (i) a reduction in the difference between low-voltage professional tariffs and residential tariffs;
- (ii) continuous price degression as a function of demand;
- (iii) a new seasonal price adaptation;
- (iv) a balancing-out between fixed charges and commodity rates;
- (v) a different method of invoicing reactive energy;
- (vi) establishment of a ceiling price which replaces the previous reduction rule;
- (vii) establishment of minimum monthly invoicing for active energy;
- (viii) a modification of certain factors determining indexing (NDH).

BELGIUM

The result is a certain simplification of tariff formulae. Two tariffs are now applied, two-part A and two-part B, with the following formulae for power demands:

Two-part A

Fixed charge	BFR x kW x month	winter $184.6 \times I_{ndh} \times D \times N_{dh}$ summer $175.4 \times I_{ndh} \times D \times N_{dh}$
Commodity rate	BFR x kWh	day $1.017 \times I_{ndh} \times D \times N_{dh} + 0.642 N_c$ night $0.549 \times I_{ndh} \times N_{dh} + 0.542 N_c$
Ceiling price	BFR	$(1.278 + 1.017 D) \times I_{ndh} \times N_{dh} + 0.642 N_c$

Two-part B

Fixed charge	BFR x kW x month	winter 491.0 mid-season 392.7 summer 343.8	} $\times I_{ndh} \times D \times N_{dh}$
Commodity rate	BFR x kWh	day $0.214 \times I_{ndh} \times N_{dh} + 0.642 N_c$ night $0.141 \times I_{ndh} \times N_{dh} + 0.542 N_c$	

The two-part tariff A applies to consumers receiving a medium-voltage supply with:

- (i) a demand of $< 1\ 000$ kW;
- (ii) or a demand of between 1 000 and 4 000 kW and a load factor lower than 4 000 h (standard consumers I_a, I_b, I_c, I_d, I_e).

The two-part tariff B applies in other cases (standard consumers I_f and I_g).

The summer lasts four months from May to August.

The mid-season for tariff B comprises four months: March and April, September and October.

The night lasts nine hours, the limits being fixed by the distributors.

The minimum monthly bill is fixed at BFR 3 360 x I_{ndh} x N_{dh} , for example, when a company closes down during the holiday period. The demand element taken into account is the maximum quarter hourly demand, measured monthly in kW.

$$\text{Parameter D is: } 0.75 + \frac{70}{280 + kW}$$

N_{dh} is an index which takes account of the cost of wages and certain materials:

$$(0.78 - 0.32\mu) + 0.2365 + 0.1715\mu \frac{S}{178.081} + 0.150\mu \frac{Mx}{989.40}$$

Symbols μ S Mx are the same as for low voltage (see § c).

The factor μ has developed as follows:

1.1.1982	=	0.05
1.1.1983	=	0.65
1.1.1984	=	0.80
1.1.1985	=	0.85
1.3.1985	=	0.90
1.5.1985	=	0.95
1.7.1985	=	1.00

I_{ndh} is an index which takes account of additional investment in nuclear power stations

$$= 1 + b \frac{Pn (Cn - Cc)}{\text{reference capital cost}}$$

where b is the effect, in the part of the average high-voltage selling price excluding fuel, of the fixed capital cost of thermal power stations. The rest of the formula is the same as that for low voltage (see (c)).

N_c is an index reflecting the development of fuel costs as for low voltage (see (c)).

These indices have developed as follows:

January	I_{ndh}	N_c	N_{dh}
1980	-	1.2890	1.0693
1981	-	1.7754	1.0851
1982	1.025 ¹	2.1488	1.1313
1983	1.074	2.4643	1.2434
1984	1.123	2.2893	1.3234
1985	1.123	2.3154	1.3921

¹ Introduced in October 1982.

In addition, charges are made for meter rental. For the sake of simplicity, these have been taken as 1 centime per kWh.

In the calculations, the various tariff periods have been weighted by duration.

Reactive energy is free if consumption does not exceed 50% of active energy consumed by day, which corresponds to a value of $\cos \varphi = 0.8944$. There is a penalty when the proportion of 50% is exceeded. As the price of supplying the standard consumers of this study must be calculated for $\cos \varphi = 0.90$, reactive energy does not give rise to any bills.

(f) Industrial prices - analysis

The results are given in Table 20 in the annex.

Between 1980 and 1985, current VAT-exclusive prices rose from 46 to 62% depending on consumption. However, the upward trend which had been in evidence for many years slowed down or even stopped in 1984. Between January 1984 and January 1985, the new tariffs gave rise to minimum increases (a few per cent) or even slight reductions for certain categories (for example, I_c). Another consequence of the new tariffs is that small industrial or commercial users (I_a and I_b), who had the same prices up to 1983, now fall under the ceiling price which differs depending on power requirements. The result is a slight price depression.

The limited price increases since the beginning of 1984 result from:

- (i) a readjustment between standing charges and commodity rates;
- (ii) the stabilization of the index reflecting investment in nuclear power;
- (iii) the stagnation of fuel costs;
- (iv) the moderate rise (+ 5%) in wages and industrial materials.

The development is not strictly parallel for all consumption levels, the largest consumers having to pay the greatest increases. The result is a decrease in tariff depression. The reduction in unit price between extreme types of consumers is 48% in 1985 as opposed to 53% in 1980.

Unlike the ceiling price, the floor price referred to in paragraph (e) does not affect the standard consumers in this study so much as those companies which cease activities during the holiday period and which must still pay a minimum charge even if their electricity consumption is zero or negligible.

In all cases, the prices of electricity for industry are increasing faster than those of all goods and services as reflected in the implicit GDP price index (+ 32% since 1980). At the present time, electricity is therefore more expensive in constant terms than in 1980.

6. LUXEMBOURG

(a) Situation in the electricity industry

The supply and distribution of electricity within the Grand Duchy of Luxembourg is shared by two companies: Sotel and Cegedel.

Sotel serves the iron and steel sector and its supplies come mainly from the electricity produced by the steel industry itself in thermal power stations fired by blast furnace gas while the remainder is imported from Belgium. Sotel has its own service grid and does not supply electricity to the public.

This is done by Cegedel either directly or through resale agencies. Cegedel does not produce electricity but imports 96% of its supplies from Germany and the remaining 4% is purchased from local hydroelectric power stations. The sales of Cegedel are made up of one quarter to resale distributors and three quarters direct sales.

The domestic market (Sotel, Cegedel, resale distributors and industrial self producers) was broken down as follows in 1984:

Users	% GWh	Standard consumers
Households	15	D _a ... D _e
Railways	1	
Commerce, services	17	I _a , I _b
Industry	66	I _c ... I _g
Total	100	

Low voltage sales in 1984 to households were made up as follows:

kWh/year	% consumers	% GWh	Standard consumers
< 1 000	8.7	1.2	D _a
1 000 - 2 000	15.9	5.6	D _b
2 001 - 5 000	48.7	38.2	D _c
5 001 - 10 000	21.2	32.1	D _d
> 10 000	5.5	22.9	D _e
Total	100	100	

The prices shown in this study are those supplied by Cegedel.

(b) Taxes

Electricity sales are subject to value-added tax, the rates of which were as follows on the price before VAT:

5% until 30 June 1983;

6% from 1 July 1983.

VAT is deductible for industrial and commercial consumers.

(c) Household prices - tariffs

The present tariff system results from the agreement of 27 January 1982 between the government and Cegedel. For domestic purposes, this tariff comprises:

- (i) monthly meter rental;
- (ii) indexed fixed monthly charge;
- (iii) indexed commodity rate.

This latter element is degressive, depending on the periods of the day, for consumers with a meter clock which records three periods:

- (i) night (10 hours);
- (ii) day (14 hours);
- (iii) peak (= 12% of day consumption).

Both standing charge and commodity rate vary in accordance with a weighted synthetic index (E_B) which takes account of the following indicators:

- (i) 46% purchase price of electricity;
- (ii) 12% index of conventional wages;
- (iii) 38% index of cost of living;
- (iv) 4% constant term.

This index has developed as follows:

January	1982	1983	1984	1985
E_B	1.000	1.121	1.310	1.336

For more details on tariff formulae and index system, see the previous publication Electricity prices 1978-1984, ISBN 92-825-5166-0.

(d) Household prices - analysis

The results are given in Table 19 in the annex.

A striking characteristic is the zig-zag pattern, with a year of steep increase followed by a year of slight increase.

The year 1984 was a period of very low increase, less than 2% for all consumption levels.

Over the entire period 1980-85, increases in current prices range from 62 to 84% depending on consumption levels.

The causes are:

- (i) revision of the selling price of electricity in Germany;
- (ii) deterioration of the exchange rate between the Luxembourg franc and the DM;
- (iii) increase in consumer prices;
- (iv) wage increases;
- (v) VAT increased by one point in 1983.

Tariff depression remains stable, the largest standard consumer (electrical heating D_e) paying one third of the unit price paid by the smallest (D_a). This depression is very marked, resulting mainly from the low night prices offered (six times less expensive than for peak hours).

Although the tariff adjustment of 1984 was below the inflation rate, electricity has gone up much more than all goods and services over the period 1980-85 (43% rise in the GDP implicit price index). Despite this increase in 'constant' terms, consumption by households continues to rise. In 1984, average consumption per household was 4 331 kWh/year, an increase of approximately 25% over 1980.

(e) Industrial prices - tariffs

The present tariff system was established on 27 January 1982 by an agreement between the government and Cegedel.

The tariffs are three-part, made up of:

- (i) monthly rental for measuring devices;
- (ii) indexed demand charge;
- (iii) indexed commodity rate.

The charge is levied on a 'reduced' demand in accordance with a formula which lowers the price depending on the amount of power dispensed within peak periods. Three cases are calculated - 0%, 50% and 100% power reduction. The figure of 50% is the most frequent and has been used here for international comparison.

The commodity rate is split over two periods:

- (i) day (16 h);
- (ii) night (8 h).

Demand charge and commodity rate come under an artificial weighted index (EM or EH) which takes account of the following indicators:

EM	EH	
64%	80%	Selling price of electricity
7%	2%	Index of conventional wages
26%	16%	Cost-of-living index
3%	2%	Constant term

The index EM is applied to medium voltage (standard consumers I_a , I_b , I_c and I_e) and EH to high voltage (I_f and I_g).

These indices have developed as follows:

January	1982	1983	1984	1985
EM	1.000	1.138	1.351	1.374
EH	1.000	1.152	1.386	1.406

For further details on tariff formulae and index scheme, see the previous publication Electricity prices 1978-1984, ISBN 92-825-5166-0.

(f) Industrial prices - analysis

The results are given in Tables 20 and 21 in the annex.

Over the entire period 1980-85, current VAT-exclusive prices have gone up by 80 to 90%. The development is in a wave form, as for domestic uses, with one year of steep rise followed by one of slight decrease. The year 1984 is characterized by a very slight increase, less than 2%.

Increases in industrial tariffs are a little less drastic than those for households - this discrepancy results from the index system. For industrial usages, the selling price of electricity has much more weight in the indices (see paragraphs (c) and (e)). This selling price for electricity imported from Germany has gone up more than the other elements, i.e. cost of living and wages in the Grand Duchy.

Tariff degression has not varied during the period under study - the reduction in unit price between standard consumers I_f and I_a is still 50%.

Electricity has become more expensive since 1980 than total goods and services (43% increase in the implicit GDP price index), though this tendency was interrupted in 1984.

Electricity is now much more expensive than in 1980 in 'constant' terms.

This fact, in conjunction with the economic crisis which has affected heavy industry in particular, explains the stagnation or even decline of electricity consumption in industry.

7. UNITED KINGDOM

(a) Situation in the electricity industry

The electricity supply industry was brought under public ownership in 1947 with a further reshaping in 1957. This reshaping gave the pattern still in force, with some small alternations.

In England and Wales the structure has two levels:

- (i) generation and transmission under responsibility of CEGB;
- (ii) distribution and sales under responsibility of Area Boards.

The Central Electricity Generating Board (CEGB) is a statutory corporation in charge of planning, construction and operation of power stations and the transmission grid (400 kV and 275 kV) within England and Wales. The CEGB does not sell directly to customers apart from a few exceptions at a national level, like railways.

The Area Boards, of which there are 12 over England and Wales (see map), take their supplies from around 100 supply points on the transmission grid of the CEGB and sell electricity to customers through distribution grids (at voltages from 132 kV down to 415 volts).

In Scotland and Ulster there are three 'all purpose' Area Boards operating generation, transmission and distribution of electricity.

Activity in England and Wales is coordinated by the Electricity Council. The Electricity Council acts in the fields of finance, demand forecasting, investment, planning, tariff proposals, research and public relations.

Neither the CEGB nor the Area Boards are in a monopoly position, this situation being enforced by the 1983 Energy Act, which introduced competition by permitting persons to generate and supply electricity as a main business.

All Electricity Boards are required:

- (i) to supply electricity, on request, to the private generators or suppliers of electricity;
- (ii) to purchase privately generated electricity;
- (iii) to allow the use of their own transmission and distribution systems by private generators and suppliers.

This has resulted in three tariff systems:

- (i) Bulk supply tariff for sales by the CEGB to the Area Boards;
- (ii) Area Board retail tariffs for industrial, commercial and domestic customers, which are of interest to us in this study;
- (iii) Tariffs for purchase, sale and transport, applied to private generators or suppliers.

In 1984 the sales of electricity via the public grid were made up as follows (provisional results):

Users	Number of subscribers		Sales % GWh	Standard consumers
	1 000 n	%		
Households	19 000	90	36.5	D _a D _e
Administration, commerce, services	1 645	8	23.2	I _a , I _b
Industry (of which steel)	180	1	36.2 (4.0)	I _c I _g
Railways	-	-	1.7	
Agriculture	220	1	1.4	
Public lighting	4	-	1.0	
Total	21 050	100	100	

Indigenous coal remains the principal fuel for the generation of electricity as can be seen from the following table which gives the net production of the public power stations (CEGB + Scotland + Ulster):

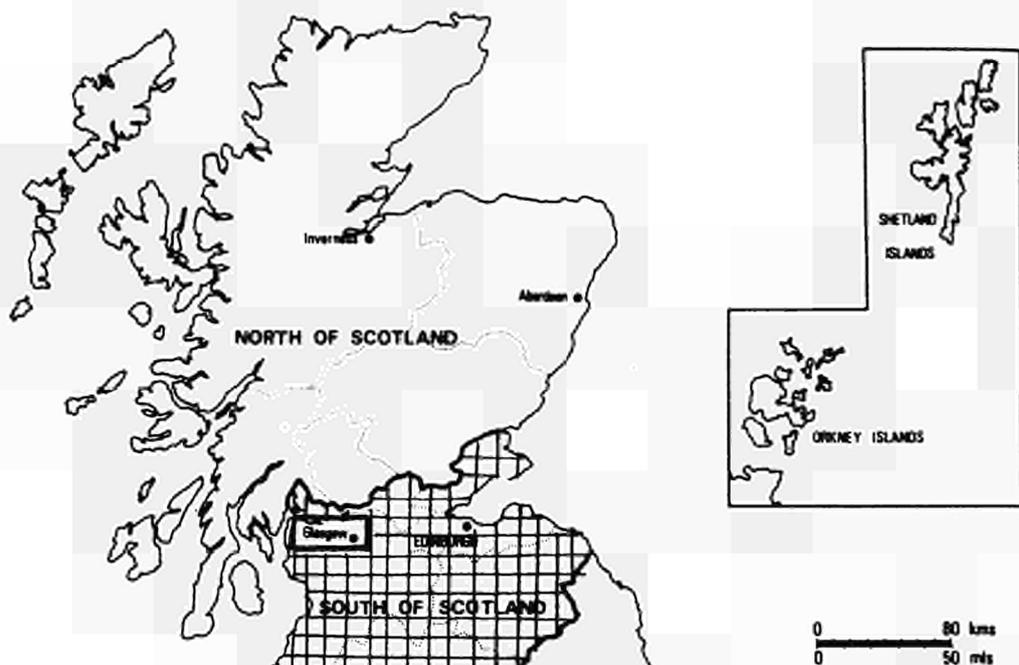
Sources	(%)	
	1980	1984
Primary hydroelectric	1.3	1.4
Nuclear fuel	11.8	17.6
Coal	76.8	47.5
Petroleum products	9.9	33.1
Natural gas	0.2	0.4
Total	100	100

1984 was affected by the miners strike which explains the massive and unexpected recourse to petroleum products.

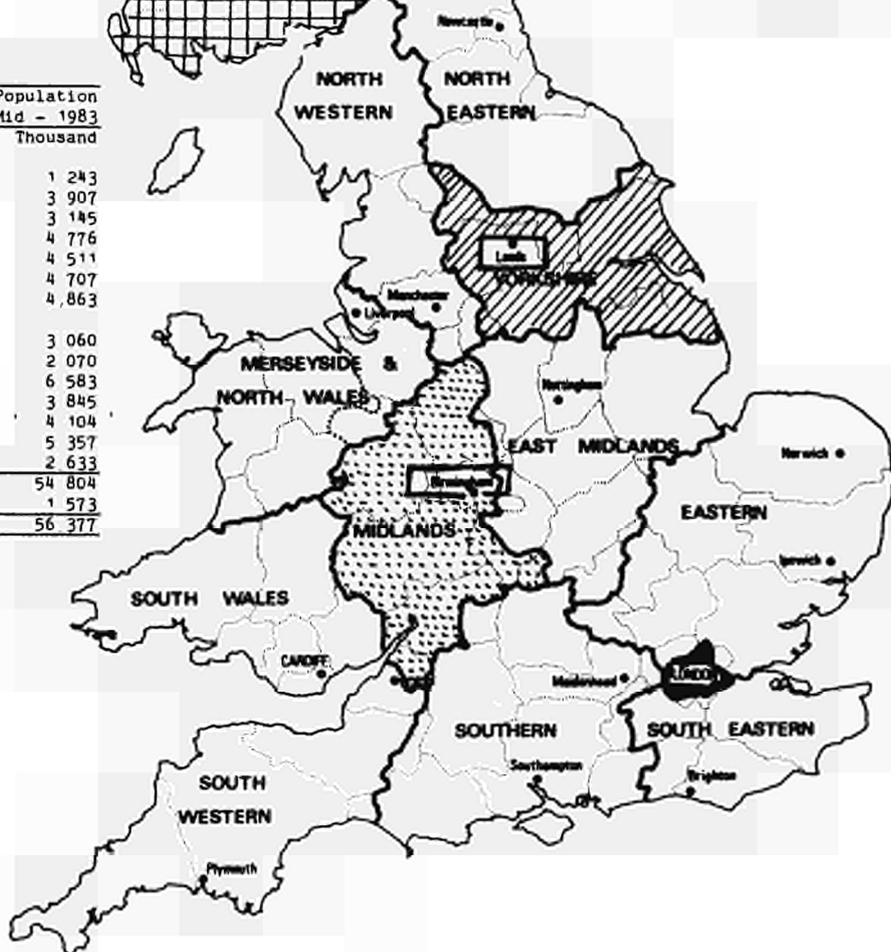
The four zones chosen for this study were:

- (i) London (London Electricity Board);
- (ii) Birmingham (Midlands);

BOUNDARIES OF ELECTRICITY BOARDS



Electricity Board	Area	Population
	Sq. miles	Mid - 1983 Thousand
North of Scotland Hydro-Electric	22 250	1 243
South of Scotland	8 150	3 907
North Eastern	5 700	3 145
North Western	4 750	4 776
Yorkshire	4 100	4 511
East Midlands	6 250	4 707
Midlands	5 100	4 863
Merseyside and North Wales	4 750	3 060
South Wales	4 550	2 070
Eastern	7 750	6 583
London	250	3 845
South Eastern	3 100	4 104
Southern	6 500	5 357
Southern Western	5 550	2 633
Great Britain	88 750	54 804
Northern Ireland	5 452	1 573
United Kingdom	94 202	56 377



-  LONDON
-  BIRMINGHAM
-  LEEDS
-  GLASGOW

- (iii) Leeds (Yorkshire);
- (iv) Glasgow (South of Scotland);

and represent about one third of the population and the sales of electricity in Great Britain.

(b) Taxation

No taxes are levied on electricity sales, the VAT rate remaining at 0% during the period studied.

(c) Household prices - tariffs

It is sufficient to summarize the tariff system as no change has taken place since the last study.

Households can choose one of three tariffs:

- (i) Credit tariff of the simple two-part type;
- (ii) Prepayment tariff which differs from the above in that the fixed charge is to cover the costs of the more complicated meter which also records the standing charge;
- (iii) 'Economy 7' tariff which has different rates for day and night.

The credit tariff applies to standard consumers D_a and D_d since it leads to more favourable prices and covers more consumers. The Economy 7 tariff applies to standard consumers D_c , D_d and D_e who take their electricity at night.

To protect the small consumers, the standing charge is limited to no greater than one half of the total bill. This rule applies to a consumption up to 110/120 kWh per quarter and does not, therefore, affect the standard consumers in this study.

(d) Household prices - analysis

Two tables in the annex (Nos 22 and 23) give the prices for the four regions covered by the study.

During the period 1980-85, current prices have risen by 53 to 71% depending on consumption level and region. The price of fossil fuels has doubled in the same period. Fuel costs are not fully reflected in the selling prices to final consumers as the standing charges have been maintained at as low a level as possible.

One example is the revision carried out on 1 April 1984, which resulted in a 2% increase on the commodity rate, while the standing charges remained unchanged. The increases depend on consumption levels. The largest consumers, which can use electricity during the night thanks to storage devices, have suffered the least.

This is because of the favourable kWh night rates of the 'Economy 7' tariff. The night price is currently 35% of the day price and 37% of the normal rate (credit tariff). In 1985, depression, i.e. the reduction in unit price between extreme categories of consumer (D_e/D_a) was 70%.

The greater discrepancy between day and night prices has two consequences:

- (i) spread of storage heaters (more than one million subscribers to the Economy 7 tariff in 1985);
- (ii) protection of the small consumer with a modest income by means of the tariff rules referred to above.

Price developments also depend on region; the greatest rises are in the lowest-price regions and vice versa, so that regional differences have lessened since 1980.

The cheapest zone is still southern Scotland (Glasgow) and the most expensive London.

Regional differences are as follows:

Standard consumers	(% London/Glasgow)	
	1980	1985
D _a	+ 34	+ 25.5
D _b	+ 29.5	+ 25
D _c	+ 20	+ 15
D _d	+ 18	+ 15
D _e	+ 10	+ 6.5

These figures show that regional differences are greater when consumption levels are low, this being the effect of fixed charges.

Comparing the development of electricity prices with that of all goods and services as reflected by the GDP implicit price index, two periods emerge:

- (i) up to 1983, electricity rose more than other prices taken as a whole;
- (ii) the converse situation obtains after this period.

In this respect, therefore, there is a break in the trend. Despite the slowing-down of electricity price rises since 1983, electricity is still more expensive in real terms in 1985 than it was five years previously.

(e) Industrial prices - tariffs

It will be sufficient to summarize the tariff system here as it has not been modified since the last study, to which reference should be made for further details.

Small commercial or industrial consumers (I_a and I_b) are billed under a quarterly two-part tariff, with standing charge and commodity rate in two degressive blocks. An 'Economy 7' tariff is also optional for those who can restrict their consumption to the night hours (which is not the case of I_a and I_b in this study).

Much more complex tariffs apply to the larger consumers ($I_c - I_g$). These are monthly tariffs which can be divided into two large categories:

- (i) maximum demand (I_c to I_e);
- (ii) load management warning terms (I_f, I_g).

The maximum demand tariffs are made up of five elements:

- (i) a standing charge to cover meter rental and connection to the system;
- (ii) an availability charge based on kVA;
- (iii) maximum demand charge often based on the kW measured during part of the year only;
- (iv) price per kWh, with a different day and night rate;
- (v) a fuel cost adjustment clause applied to the kWh rates and having the effect of an index system with a triggering threshold.

The load management tariffs are more closely linked to the bulk supply tariff of the CEGB and allow a part of the capacity charge to be saved when the consumer reduces his load on the request of the Area Board. This clearly happens during peak hours.

(f) Industrial prices - analysis

Two tables in the annex (Nos 24 and 25) give the prices in the four regions covered by this study.

Current prices increased by 40 to 60% between 1980 and 1985. There is no strictly parallel development between regions and between the three tariff families though there is little difference between consumption levels. As for domestic use, the cause of these increases lies in the doubling of fuel costs.

The trend in time is very clearly upward up to the beginning of 1983; after this, the movement stops with stability of prices or even slight reductions in 1983; there was a rise of a few percent in 1984. These rises are not the same for all regions; in general, the lowest are for London. As this region was the most expensive in 1980, the result is a decrease in regional differences, which are less than 8% in 1985 for large industrial consumers (I_c to I_d) as opposed to 15% in 1980. These differences are still greater for the small commercial and industrial consumers (I_a and I_b). As the rates of increase do not develop in parallel from one region to another, the regions cannot be clearly classified as a function of price levels. London can no longer claim to be the most expensive region as it is for domestic uses. Tariff degression is homogenous between regions and stable in time; in 1985, the reduction in unit price between extreme categories of consumer (I_g, I_a) was 38%.

A comparison with the GDP implicit price index shows that electricity went up much more than all goods and services up to 1983 though less dramatically afterwards. The upward trend in 'constant' terms has been broken. This certainly explains to some extent the fall-off in industrial consumption to 1983, which picked up again from 1984.

CEGB's future objective is to maintain prices in line with inflation.

8. IRELAND

(a) Situation in the electricity industry

The Electricity Supply Board (ESB) - established by government order in 1927 - operates an integrated electrical system for the whole country, being the sole authority in charge of the complete operation from generation to consumer service.

The ESB operates a unified tariff for the whole country, whose rates are fixed with the approval of the National Prices Commission, which was given the task of dealing with price changes.

The fuel cost is important as 90% of electricity is generated in thermal power stations. In recent years three fuels are burnt in the power stations: peat, fuel-oil, natural gas.

Nowadays ESB supplies about 9 000 GWh per year to 1 145 000 consumers, of which approximately 6 000 are industrial. The pattern of sales may be summarized as follows, showing the position of the standard consumers in this study.

Domestic consumers

kWh/year	% of total consumers			% of total sales			Standard consumers
	Urban	Rural	Total	Urban	Rural	Total	
< 1 000	11.7	26.4	18.1	1.8	3.9	2.6	D _a
from 1 000 to 2 000	20.2	24.8	22.2	8.7	12.5	10.2	D _b
from 2 001 to 5 000	46.6	33.3	40.8	44.5	36.4	41.3	D _c
from 5 001 to 10 000	19.4	12.0	16.1	36.4	27.7	33.0	D _d
> 10 000	2.2	3.6	2.8	8.7	19.4	12.9	D _e

Industrial consumers

Power kW	% of sales	Standard consumers
< 100	4.2	I _a , I _b
100 - 500	17.7	I _c , I _d , I _e
501 - 1 000	15.1	
1 001 - 5 000	36.5	I _f , I _g
> 5 000	26.5	

The net production of the public power stations was from the following sources:

Sources	(%)	
	1980	1984
Primary hydroelectric	8.3	6.4
Coal	0.7	0.4
Peat	15.2	18.7
Petroleum products	60.2	19.7
Natural gas	15.6	54.8
Total	100	100

(b) Taxes

VAT has remained at 0% for electricity, unlike other sources of energy. Electricity sales are thus not subject to any taxation.

(c) Household prices - tariffs

Urban domestic consumers are charged on a two-part tariff consisting of a standing charge and a constant kWh rate. In addition to this a reduced rate is available for night space heating during a nine-hour night period. Deliveries under this reduced tariff are measured separately and controlled by time switch.

Rural farm and domestic consumers are charged on a similar tariff but the standing charge is related to the floor area and there is a charge for out offices. The kWh rates for normal use and night space heating are the same as urban domestic.

Example of tariff available in Dublin - January 1985:

Standard consumers	Standing charge per 2-month period	Commodity charge p/kWh	
		Normal	Night heating
D _a , D _b	IRL 3.20	7.85	-
D _c , D _d , D _e		7.85	3.85

There is also a night and day tariff available to domestic consumers but only 0.2% of domestic consumers have made use of this tariff to date.

(d) Household prices - analysis

The results are given in Table 16 in the annex. During the period under study, prices rose by 101 to 118%, the largest increases being for consumers D_b and D_c. The tariff system does not encourage consumption except for off-peak hour heating. Night consumption is offered at half price.

Tariff degression has remained constant; in 1980, D_e paid 53% of the price paid by D_a as compared with 55% in 1984. This degression is mainly caused by night consumption.

The prices in rural areas are higher than in urban zones as shown by the table. The difference was 20% for the smallest consumers (D_a) in 1985, but only 2% for night heating (D_e) under the influence of the standing charge.

Prices rose by 6 to 7% between January 1984 and January 1985, i.e. slightly more than the inflation rate (5.7%).

Electricity prices have been growing faster than those of all goods and services, reflected in the GDP price index, since 1981.

The main cause is fuel costs, which make up 42% of total costs. Fuel-oil prices have tripled in the study period, making them more expensive than peat. Faced with this situation:

- (i) peat consumption levels have been maintained;
- (ii) several power stations have been converted to natural gas of national origin which is cheaper.

However, the capital costs incurred in the conversion and also by a current drive towards coal conversion have outweighed the advantages of cheap indigenous natural gas.

(e) Industrial prices - tariffs

The tariff normally applied to industrial consumers consists of four elements:

- A - demand charge;
- B - service capacity charge;
- C - commodity rate;
- D - low power factor surcharge.

- (A) The demand charges are based on the two monthly maximum demand which is measured differently in summer and winter. During the winter (November to February) the demand is measured for two hours Monday to Friday. It was taken that in practice billed demands in winter were on average 65% of actual demands. The effect of this is the same as erasing 35% of the demand.

In summer (March-October) the demand charges are based on the maximum demand in that two-monthly period or 70% of the highest chargeable maximum demand in the preceding 10 months, whichever is the greater. This maximum does not affect the standard consumers taken in this study (see table of correction coefficient in Chapter II).

Furthermore for high voltage the demand charge rates differ according to the season.

In our calculation we have taken $\frac{4}{12}$ winter and $\frac{8}{12}$ summer.

(B) The service capacity charges are based on two monthly maximum demand (minimum 30 kW) but may not be less than the highest chargeable maximum demand in the previous 10 months (five billing periods). For the purposes of this study the service capacity charges were based on the annual maximum demand. These charges apply only to high voltage supplies (standard-consumers I_d , I_e , I_f , I_g). The kW metering is done on a 15 minute basis (A and B).

(C) The price per kWh depends on

- (i) the voltage;
- (ii) the time (night or day);
- (iii) the season (winter or summer);
- (iv) the consumption block, the limit of which is decided by the chargeable maximum demand.

The price applied during the nine-hour night period (from 23.00 h to 8.00 h) is uniform.

For day time consumption there are two consumption blocks. The limit between them is calculated as follows: 350 kWh per kW of chargeable maximum demand per two-monthly period (see A).

Summer is from March to October, winter from November to February.

We have considered 40% of consumption to be during the winter.

(D) The low power factor surcharge for reactive energy, where $\cos \varphi$ is below 0.95, was not taken into account in this study, as most users have correction equipment to avoid this surcharge.

Example of tariffs available in Dublin - January 1984

Tariffs	Low voltage 220 & 380 V	High voltage		
		10 kV	38 kV	110 kV
Standard consumers	I_a, I_b, I_c	I_d, I_e	I_f, I_g	
A. Demand charges (two-monthly) IRL x kW	9.85	6.10 ¹ 8.40 ²	5.10 ¹ 8.10 ²	5.40 ¹ 8.00 ²
B. Service capacity charges (two-monthly) IRL x kW	-	1.70	1.65	1.60
C. Commodity rate (P/kWh)				
Day: first block ³	6.30	5.85	5.65 ¹ 5.90 ²	5.60 ¹ 5.85 ²
Excess	5.90	5.35	5.15 ¹ 5.40 ²	5.10 ¹ 5.35 ²
Night	3.70	3.55	3.50	3.45

¹ Summer 8 months (March to October).

² Winter 4 months (November to March).

³ 350 kWh x kW (A) per two-month period.

The low voltage is supplied up to a maximum demand of 500 kW.

(f) Industrial prices - analysis

The results are given in Table 18 in the annex.

Between 1980 and 1985, increases in current prices were from 100 to 114% depending on consumption. Major rises occurred in 1980 and 1981, exceeding even 50% during a single year, whereas stabilization set in January 1982. The increases are due to higher prices for petroleum products used in the power stations. This is the after-effect of the second oil crisis.

The increase is less marked for the small industrial and commercial consumers (I_a and I_b), resulting in a slight contraction of tariff degression.

In 1985, a large consumer (I_f) paid 44% less than the smallest consumers (I_a and I_b) as opposed to 47% in 1980.

However, this reduction in unit price derives mainly from the load factor and night consumption as the tariff system does not encourage high consumption except at night. The difference in price between I_a and I_f is mainly due to the night consumption (29%) of standard consumer I_f .

If night consumption were not taken into account, tariff degression would be minimal and sometimes non-existent. For example, standard consumers I_a and I_b pay the same unit price, although their consumption differs, for they have the same load factor (1 000 h) and fall in the same tariff block. The limit of this block rises as the demand rises.

Another example is the minute price difference (3%) between an industrial consumer requiring 2 000 000 kWh/year and another who uses five times more with the same load factor (cf. I_e and I_f).

While degression in quantity terms is very close, the kWh night price is 40% lower than the day price.

Over the entire period 1980-85, prices for industrial and commercial usages have gone up faster than the prices of all goods and services as reflected in the GDP price index. As a result, electricity is now more expensive in real terms than in 1980.

However, this tendency ceased last year. From January 1984 to January 1985, prices went up by 3 to 5% only, i.e. less than the inflation rate and in contrast with domestic user prices, which have gone up even more. This results from additional supplies of natural gas; the cost advantages have been credited to the industrial tariffs in the form of a rebate (from 2 to 5%) applied retroactively from 1 January 1985. This rebate has already been deducted from the prices given in the annex.

9. DENMARK

(a) Situation in the electricity industry

Electricity in Denmark is distributed by 117 companies of varying size, owned chiefly by local administrations (51) or cooperatives (54). For reasons of scale, power stations are administered by 12 major companies which are interconnected with each other and with the neighbouring countries of Germany, Norway and Sweden. However, there is no link between the west (Jutland and Fyn) and the East (Zealand and other islands) across the Great Belt.

In the west, companies are grouped in the Elsam association and in the East, the Elkraft association, the aim being to coordinate production, transport, common fuel purchases and exchanges with other countries.

Electricity distribution in the country as a whole is broken down as follows:

(Results for 1984)

Users	Number of subscribers		% of sales GWh	Standard consumers
	1 000 n	%		
Domestic	2 191	83.5	32.9	
< 1 000 kWh	(115)	(4.4)	0.2	D _a
1 000 - 2 000 kWh	(237)	(9.0)	1.0	D _b
2 001 - 5 000 kWh	(1 077)	(50.0)	10.0	D _c
5 001 - 10 000 kWh	(450)	(17.2)	8.0	D _d
> 10 000 kWh	(312)	(11.9)	13.7	D _e
Agriculture and horticulture	163	6.2	8	-
Commerce and Services	205	7.8	27.8	I _a , I _b
Industry < 1.5 GWh	32.5	1.3	10	I _c , I _d
> 1.5 GWh	0.5	0.0	17.9	I _e , I _f , I _g
Public lighting	9	0.3	1.5	-
Railways	-	-	0.6	-
Others	24	0.9	1.3	-
Total	2 625	700	700	

Source: Dansk Elforsyning 1984. Danske Elvaerkeres Forening.

DENMARK

The prices given in this study are for the two companies which cover the Copenhagen urban area: the Copenhagen Lighting Board (Københavns Belysningsvaesen), which belongs to the local authority and supplies the centre of the city, and NESAs (which supplies most of the suburban communities and the north of Zealand).

These two companies are the largest in the country, accounting for one third of sales and consumers in Denmark and 62% of the Elkraft zone.

Almost all the electricity comes from conventional power stations which are mainly fuelled with imported coal. Hydroelectric production is negligible and there are no nuclear stations.

The net production of public power stations is:

	(%)	
	1980	1984
Hydroelectric	0.1	0.1
Coal	81.5	96.8
Petroleum products	18.4	3.1
Total	100	100

(b) Taxes

Electricity sales are subject to two taxes:

- (i) a special tax introduced in 1977 which amounts to a lump sum per kWh consumed;
- (ii) VAT, which is a percentage of the price including the special tax.

Both these taxes are deductible for non-domestic uses.

Their rates have developed as follows:

January	1980	1981	1982	1983	1984	1985	Base
Special tax	8	12.5	12.5	15.5	15.5	15.5	Øre/kWh
VAT	20.25 ¹	22	22	22	22	22	% of price before VAT

¹ Increased on 1.7.1980.

(c) Household prices - tariffs(i) Københavns Belysningsvæsen

The tariffs introduced in 1983 are still in effect and are made up of:

- (a) annual standing charge;
- (b) commodity rate per kWh;
- (c) fuel surcharge per kWh.

Only the fuel surcharge has been modified; it was raised to 23 øre/kWh in January 1985 from 14 øre/kWh in 1984.

For further details on tariff formulae, see the preceding publication Electricity prices 1978-1984.

(ii) NESA

The tariff system was adjusted on 1 January 1985 when a new peak/off-peak tariff was established. Two tariffs are thus now offered for domestic uses:

(a) Normal tariff:

annual subscription 450 DKR;
commodity rate 39.8 øre/kWh.

(b) peak/off-peak tariff:

annual subscription 770 DKR;
commodity rate:
peak hours 56.8 øre/kWh;
off-peak hours 22.7 øre/kWh.

The rates given exclude taxes.

The total annual bill for the normal tariff has a ceiling of 177.27 øre per kWh, including all taxes, which comes into effect when consumption does not exceed 500 kWh per year.

Application of the peak/off-peak tariff presupposes the installation of a three-phase meter. The peak hours run from 6 to 20 h on working days (7 to 21 h during the summer).

This tariff is only interesting when the consumer uses more than half his electricity during off-peak hours. It only applies here to standard consumer D_e.

(d) Household prices - analysis

The results are given in Table 26 in the annex.

Taken overall, current prices, including all taxes, went up from 65 to 85% between 1980 and 1985. One exception is the 'all-electric' use in North Zealand (NESA), where a new tariff was introduced which favours storage heating (price reduced by 6% between 1984 and 1985; total increase of 40% since 1980).

There are two causes for the upturn:

- (i) higher taxation;
- (ii) increase in fuel costs.

The final consumer is hit hard by taxation, which makes up approximately one-third of the selling price in 1985.

The upward movement is irregular: a climb in 1981, a slackening off in 1983 and a picking up again in 1984, in Copenhagen for example (KB). In addition, this tendency varies with consumption levels and zones. In the centre of Copenhagen (KB), the largest consumers have to cope with the greatest increase; the reverse obtains in the suburban zone (NESA).

For the small consumers (D_a and D_b), prices are lower in the centre of Copenhagen than in the suburban zone and the reverse holds true for the largest consumers. This reflects the different tariff policies, where social considerations can be detected. The centre of the city has many small consumers with modest incomes who have generally been spared the increases.

Since the NESA tariff adjustment, price degeneration between the extreme consumers (D_e , D_a) is more obvious, with a reduction of around 60% on the unit price due to the quantities consumed (effect of the two-part formulae) and to the advantageous tariffs for off-peak hours.

Since the beginning of 1980, electricity has gone up drastically by comparison with goods and services since the implicit GDP price index has only risen by 44% in this period.

Despite this increase in real terms, electricity consumption remains high in Denmark at 3 760 kWh per year and per domestic subscriber (1984 figures). After a brake on consumption during the period 1980-82 following severe price increases, the trend was reversed from 1983. The degree of comfort and spread of electrical equipment is very high in Danish dwellings, 80% of households having electric cookers, 90% refrigerators, 60% washing machines and 20% dishwashers.

Finally, electric heating represented 17% of total electricity consumption by households in 1984.

(e) Industrial prices - tariffs

(i) Københavns Belysningsvaesen

The normal tariff is applied for domestic uses up to 100 000 kWh per year (I_a and I_b).

Above this limit there are more complicated tariffs consisting of four elements:

- annual standing charge;
- demand charge measured in kVA;
- commodity rate (with two blocks for low-voltage supplies);
- fuel surcharge with a correction coefficient depending on voltage.

There are two variants, one for high and one for low voltage.

The low-voltage variant may not exceed a certain maximum which is calculated at the end of the year and can thus give rise to reimbursement.

The demand charge and commodity rate may not exceed the commodity rate of the normal domestic tariff. This threshold applies up to approximately 1 000 000 kWh/year, i.e. to standard consumer I_c .

All these tariffs have been in effect since 1983, with the exception of the fuel surcharge, which was raised in January 1985 to 23 øre/kWh from 14 øre/kWh in 1984.

For more details of tariff formulae, see the previous publication Electricity prices 1978-1984.

(ii) NESA

The introduction of new tariffs, compulsory for new subscribers and optional for existing ones, makes 1985 a year of transition. In this study, the standard consumers have been taken to be existing subscribers opting for the most favourable tariff.

Charges are thus as follows:

- non-domestic users whose demand corresponds to a circuit breaker of less than 200 ampères (I_a , I_b , and I_c) who pay the normal domestic tariff;
- larger consumers (I_d , I_e and I_f) who are charged under 'tariff B' with the two voltage variants.

In 1985, the new tariff B rates (excluding taxes) are as follows:

Voltage	0.4 KV	10 KV
Standard consumers	I_d, I_e	I_f
Standing charge DKR/quarter	1 080	1 820
Demand charge DKR/KW/quarter	120	115
Commodity rate øre/kWh	20.6	20.5

(f) Industrial prices - analysis

The results are given in Table 27 in the annex.

For non-domestic uses, analysis must be based on the tax-exclusive prices since even the specific tax is deductible, as is VAT.

Under these conditions, it is not surprising to find that price increases are much more moderate than for domestic uses since the tax effect has been eliminated.

Between 1980 and 1985, the tax-exclusive prices have risen by 40 to 78%. Including the specific tax, the figures are 53 to 80%. One sees immediately the influence of this specific tax, which is a lump sum per kWh, on industrial prices.

The price trend follows that of fuel which explains, amongst other things, the passing halt in the trend in 1983-84.

Tariff degression is around 20% if consumption is multiplied by 300 (I_f, I_a).

Prices are generally lower in the region around Copenhagen (NESA) than in the city. The most industrialized zone therefore benefits from better prices (difference of 30 to 35%).

In Copenhagen (KB), standard consumers I_b and I_c pay the same prices although the second consumes three times more. This is the effect of the tariff threshold referred to above. This system avoids distortions between small and large consumers (between two tariff families).

Another particularity of the tariff (KB) is the influence of the fuel surcharge (the bulk of electricity production costs) which decreases as more and more electricity is consumed. The correction coefficient for this surcharge is:

- 1.1 for low-voltage consumers;
- 1.05 for high-voltage consumers;
- 1.02 for the very large consumers receiving 30 kV.

In the other countries, on the other hand, tariffs reflect the increasing influence of production costs as consumption goes up.

Since 1980, electricity prices have risen more than those for all goods and services as reflected in the implicit GDP price index, which stood at 144 at the beginning of 1985 (base 100 in 1980). Electricity for commercial and industrial purposes has therefore gone up in real terms, particularly between 1980 and 1982.

10. GREECE

(a) Situation in the electricity industry

A State body (Public Power Corporation) was founded in 1950 and given a monopoly of production, transport and distribution of electricity. This corporation acquired all the concessionary electricity companies in the State. Its initial aims were to unify the electricity industry and to develop production from native sources: lignite and hydroelectric. The extraction of lignite was also controlled by a State body which joined with the Public Power Corporation to ensure a speedier realization of the latter aim.

The Public Power Corporation accounts for 99% of the electricity production in Greece, the rest being made up by some industrial self-producers (oil refineries, chemicals, food processing, textiles).

The generation of the public power stations is from the following sources:

	(%)	
	1980	1984
Lignite	43.3	56.3
Petroleum products	40.2	26.7
Primary hydroelectric	16.0	12.5
Hard coal	-	4.5
Others	0.5	-

GREECE

The consumption of electricity was broken down as follows (provisional results for 1984):

Users	% GWh	Standard consumers
Households	31.2	
of which {		
< 1 000 kWh/year	2.9	D _a
1 000 - 2 000 kWh/year	5.7	D _b
2 001 - 5 000 kWh/year	14.2	D _c
5 001 - 10 000 kWh/year	4.1	D _d
> 10 000 kWh/year	4.3	D _e
Public lighting	2.6	
Railways	0.6	
Shops, offices, small industry	18.1	I _a , I _b
Industry	47.5	I _c , I _d , I _e , I _f , I _g
Total	100	

In industry there is great disparity in the size of consumers, on one hand a large number of small industries and on the other hand a few giant industries (aluminium electrolysis for example).

There are currently about 3 million domestic subscribers made up as follows:

Consumption kWh/year	1 000 n	%	Standard consumers
< 1 000	1 305	43.5	D _a
1 000 - 2 000	657	21.9	D _b
2 001 - 5 000	879	29.3	D _c
5 001 - 10 000	117	3.9	D _d
> 10 000	42	1.4	D _e
Total	3 000	100	

Tariffs, which are the responsibility of the Public Power Corporation are revised annually if deemed necessary. In principle the date of change is 7 January but the new tariffs are not published until the end of the first quarter and are applied retrospectively. In the present study we have shown, for each year the prices valid after 7 January i.e. retrospective application of the tariffs.

(b) Taxes

Value-added tax (VAT) has not yet been introduced in Greece. Sales of electricity to households are subject to a turnover tax only, the rates of which were as follows:

until 1982 8%;

from 1983 10%.

In addition a stamp duty of 1.2% was applied from 1984 onwards for domestic uses. This duty is included in the basis of calculation of the turnover tax.

(c) Household prices - tariffs

The tariff system for domestic and professional uses in the home is the same for the whole country.

The new tariffs, in force since 7 January 1985 and valid until the beginning of 1986 are as follows:

Tariff	Two monthly standing charge DR	Commodity rate		Standard consumers
		kWh/2 months	DR/kWh	
1	-	≤ 100	7.07	D _a } D _b } D _c } D _d , D _e }
		101 - 300	8.12	
		301 - 800	9.24	
		> 800	11.20	
1 NY	116	Night	4.41	D _c , D _d , D _e

The basic tariff is two part with progressive price blocks. Very small users are protected by the lack of a standing charge. The night option must be taken in conjunction with the basic tariff. A supplementary standing charge is levied for the special meter to record the consumption between 23 h and 7 h.

(d) Household prices - analysis

The results are shown in Table 28 in the annex. They have been rectified and improved since the last study.

A peculiarity of the tariff system is the rising kWh rate as consumption increases. This together with the absence of a standing charge favours the very small consumers (D_a) who form the bulk of the clientele in Greece. This explains the progressive unit prices found for some standard consumers in this study.

A reduction in the tariff rate is due solely to night consumption, which is the case for standard consumers D_c , D_d and D_e . In 1985, the rate per kWh during the night is very advantageous, with a reduction of 60% on the maximum day rate. The reduction in unit price paid by some large consumers (for instance D_c and D_e) is due to a large proportion of their offtake during the night.

The difference in unit price between the smallest and largest domestic consumers has always been narrow but a further contraction is noticed: 21% reduction in 1985 against 35% in 1980 (D_e / D_a).

The rises in current prices for the period 1980-85 ranged from 63 to 97% according to the level of consumption, the small users suffering the lowest increases. The trend is very irregular in time. The increases between 1984 and 1985 were between 12 and 14%.

There are four reasons for the increases:

- (i) increased fuel costs (almost 90% of electricity is of thermal origin);
- (ii) salary increases;
- (iii) a rise of two points in the rate of turnover tax between 1982 and 1983;
- (iv) introduction of stamp duty from 1984.

Taxes now account for 10.2% of the tax inclusive selling price.

At first sight the rises in current selling prices seem very high but a comparison with the rate of inflation puts this in perspective. Since 1980, the implied GDP price index has risen by 148%. Thus electricity today is actually cheaper in real terms than five years ago. For small consumers one can even say that the actual price (deflated) has fallen considerably. This social category has been particularly favoured.

As a result it is not surprising to find that the average domestic consumption continues to grow: + 20% since 1980 to reach 1 928 kWh/year in 1984.

(e) Industrial prices - tariffs

Below is an extract from the new industrial tariffs in force since 7 January 1985 and valid until the beginning of 1986:

Monthly standing charge DR	Commodity rate		Standard consumers
	Monthly blocks	DR/kWh	
232 + (174 x kW)	/	8.70	I_c
302 x kW	/	6.87	I_d
835 x kW	} 400 x kW surplus	5.25	I_e, I_f, I_g
		3.48	

These tariffs are for middle voltage and are valid for the country as a whole.

Very large industrial consumers, supplied in high voltage (150 kV) are charged according to an hourly/seasonal tariff which can be summarized as follows:

- (i) demand charge kW x 777 DR/month;
- (ii) commodity rate $\left\{ \begin{array}{ll} \text{peak} & 6.38 \text{ DR/kWh;} \\ \text{off-peak} & 4.29 \text{ DR/kWh;} \\ \text{night} & 3.28 \text{ DR/kWh.} \end{array} \right.$

Up to March 1984, a rebate of 5% was given for payment within 10 days. It was considered that the standard consumers of this study ($I_e \dots I_g$) benefited from this up until 1983 inclusive.

Attention is drawn to the fact that the prices shown in the tables were calculated without taking account of the power reduction for monthly readings (see definitions in Chapter II 2.) nor the allowance for reactive energy. If the definitions of our standard consumers were strictly observed the prices would be a few percent lower.

(f) Industrial prices - analysis

The results are shown in Table 29 in the annex. They have been rectified and improved since the last study.

Our attention is drawn to certain details:

- (i) the medium voltage prices for industrial users are very close to those for domestic uses;
- (ii) load factor plays a large part but time of supply has no effect (no special off-peak rates);
- (iii) the evolution in time is very irregular.

Between 1980 and 1985 current middle voltage prices ($I_c \dots I_g$) rose by 123 to 163%, with extremely large rises noticeable at the beginning of 1984 (+ 30 to + 40%).

Between 1984 and 1985 prices rose by 15%.

Taxes play no part in these increases because no taxes are levied on sales of electricity for non-domestic uses.

Tariff degressivity, i.e. the reduction in unit price as offtake and demand increase depends on two factors:

- (i) two-part formula;
- (ii) reduced price per kWh above a limit which varies according to the demand.

Therefore the lower the demand in relation to the kWh consumption the lower the unit price paid (lower standing charge and ceiling of the reduced block reached sooner). This is the only incentive to spread consumption more evenly. In 1985, the reduction in unit price between the standard consumers I_g and I_c is 34%.

In conclusion a comparison can be drawn between the evolution of the price of electricity for industry and that of all goods and services represented by the implied GDP price index. The latter has increased by 147% between 1980 and 1985. Tariff adjustments have kept pace with inflation. The price of electricity has remained stable in 'constant' terms during the period studied.

VI. COMMUNITY COMPARISON AND CONCLUSIONS

The locations chosen for the international comparison are:

Düsseldorf	Rotterdam (GEB)	London
Paris	Brussels (= Belgium)	Dublin
Milan (= North and Centre)	Luxembourg (Cegedel)	Copenhagen (KB)
Athens		

The findings are presented in Tables 31-34 in the annex according to two units of value: current ECU and deflated PPS (see Chapter III). Table 30 gives the rates of conversion between ECU, PPS and national currencies. It also shows the deflator used (GDP price index). The prices taken for analysis were inclusive of all taxes for domestic consumers and excluding VAT for industrial consumers.

The difficulties involved in comparing price levels internationally mean that interpretations and conclusions drawn from these tables should be treated with caution.

The selection of a representative price in a country where wide regional differences exist is difficult e.g. Germany. Also electricity tariffs and therefore prices do not change on the same date which gives rise to certain transitory differences. It is therefore necessary to make international comparisons in the correct perspective, based on a time series rather than on a point in time. In addition conversion to a common unit is dubious because of exchange rates.

Nevertheless these are general problems associated with all international comparison regardless of the object of the observations.

Bearing the above in mind, these findings permit some comments and analyses based mainly on deflated PPS prices, the only unit allowing spatial and temporal comparisons.

(a) The rise in current prices is general

In current terms selling prices have increased in all countries and for all categories of consumers. But almost everywhere one observes a slowing down in the rate of increase in 1983-85 as Tables 32 and 34 in the annex in current ECU show.

The reasons are:

- (i) soaring costs of the fuels consumed in power stations, with large increase around 1981;
- (ii) inflation with pushes up wages and other costs;
- (iii) inflation in taxes in most countries.

In five years monetary inflations was such that it must be eliminated by the calculation of 'deflated' prices.

(b) Prices also rose in constant terms

Price rises appear more moderate when the effect of monetary depreciation is eliminated by calculating a time series in deflated PPS starting from the base year 1980.

In some cases we see a lowering of price levels in real terms, the most striking example being Greece.

The trend in real prices (deflated) can be summarized as follows:

	(% 1985/1980)									
Standard consumers	Düsseldorf	Paris	Milan	Rotterdam	Brussels	Luxembourg	London	Dublin	Copenhagen	Athens
	<u>Domestic consumers</u>									
D _a	11	- 16	17	10	5	20	16	24	17	- 34
D _b	13	- 3	31	13	16	17	18	28	19	- 25
D _c	20	6	38	21	19	12	15	26	25	- 19
D _d	.	7	41	21	19	40	15	20	25	- 18
D _e	19	8	/	29	19	27	15	18	29	- 25
	<u>Industrial consumers</u>									
I _a	.	27	66	0	10	34	.	18	21	.
I _b	.	15	39	- 1	10	34	2	18	21	.
I _c	5	9	37	- 1	8	30	12	22	21	0.5
I _d	5	7	41	19	14	28	4	24	20	- 3
I _e	6	2	32	25	16	26	4	26	20	1
I _f	6	3	28	17	19	34	3	23	25	+ 6
I _g	.	0	6	9	22	3	.	22	25	- 10

(c) Domestic consumers were often protected

As a social measure tariff measures were reinforced or introduced to protect the smallest domestic consumers (D_a, D_b) and to spare them sharp rises in real terms. Three methods can be seen:

- (i) progressive price blocks (Italy, Greece);
- (ii) bill limiting (United Kingdom);
- (iii) special tariff with a very low standing charge (France, Belgium).

(d) Electric central heating has become more expensive

One observes very large increases in real terms for the large domestic consumers and in particular for electric central heating (Standard consumer D_e) with one exception: in Greece. This trend has halted development of electric space heating.

(e) Industrial price trends are diverse

Looking at the trend in real prices (deflated PPS) an immediate diversity of tendencies according to country and level of consumption is noticeable.

Of particular note are:

- (i) the lowering of real prices in Greece;
- (ii) the division between low (I_a , I_b sometimes I_c) and high voltage;
- (iii) the different tariff policies towards large industrial consumers.

In this context two opposite policies are seen:

- (i) in France, Italy and Luxembourg the largest consumers have been most favoured;
- (ii) the opposite is the case for Belgium and Copenhagen.

This arises from the different break down between fixed costs and commodity rates which give rise to a great variety of tariff degressivity curves.

(f) Great differences in price degression

In general the tariffs are degressive, i.e. the unit price decreases as consumption, demand or load factor increases.

Two examples of progressive tariffs for domestic consumers are seen, in Italy and Greece. In this case the more consumed the higher the price per kWh.

Price degression can be measured by the percentage reduction between small and large standard consumers with the following results:

		(% 1985/1980)									
		Düsseldorf	Paris	Milan	Rotterdam	Brussels	Luxembourg	London	Dublin	Copenhagen	Athens
		Domestic users D_e , D_a									
1980		71	57	1	51	64	67	69	53	42	35
1985		69	45	1	42	60	65	70	55	36	15 ²
		Industrial users I_g , I_a									
1980		.	48	38	49	53	46	56	51	19	41
1985		.	50	60	45	48	59	37	50	15	28

¹ Progressive tariff.

² Reduction due entirely to night consumption.

The large reductions offered to domestic users come primarily from the advantageous night rates offered for storage heating (as in the case of D_e who consumes 15 000 kWh at night out of a total of 20 000 kWh).

The new hourly/seasonal tariff in Italy has brought about increased tariff depression in 1985.

A flat degressivity curve as seen for industrial consumers in Copenhagen and domestic consumers in Greece does not encourage consumption.

These few examples show again the diversity of tariff systems.

(g) Relative price levels between countries are not constant

Because tariff changes do not occur either at the same time or at the same rate the respective position of the countries is always changing.

The ranking order not only varies according to the period considered but also according to the level of consumption due to degressivity curves which are more or less accentuated.

Furthermore in international comparison the conversion of prices into ECU or deflated PPS gives slightly different results due to the differences which exist between market exchange rates and the real purchasing power of currencies.

The above is further evidence of the risks encountered in the comparison of price levels internationally.

However, large and regular differences are seen between certain prices regardless of the period or method of calculation.

For the years 1984 and 1985 we see:

- (i) high prices for domestic consumers in Belgium;
- (ii) dissuasive tariffs for large domestic consumption in Italy;
- (iii) low prices for households in Greece;
- (iv) competitive prices for industrial users in France, Luxembourg, the United Kingdom and Copenhagen.

The prices for middle industrial consumers in Copenhagen are particularly low.

(h) Median prices show the general trend in the Community

It is difficult to calculate an average representative price for electricity in the Community, as a whole.

Probably to compute a median price is the method least affected by stray values, exceptions, and sudden jolts.

For lack of something better, median prices are used to give an idea of the trend as follows:

Standard consumers	1980	1981	1982	1983	1984	1985	% 1985/80
Domestic uses - Community median price in deflated PPS/100 kWh							
D _a	11.73	11.99	12.75	12.68	12.46	12.55	+ 7
D _b	9.26	9.93	10.57	10.17	10.42	10.62	+ 15
D _c	7.17	7.88	8.29	8.16	8.39	8.20	+ 14
D _d	6.95	7.54	8.34	7.72	7.83	7.84	+ 13
D _e	4.80	6.14	5.66	5.91	5.63	5.94	+ 24
Industrial uses - Community median price in deflated PPS/100 kWh							
I _a	8.57	8.80	8.86	9.28	9.51	9.34	+ 9
I _b	8.46	8.80	8.80	9.28	9.39	9.14	+ 12
I _c	7.59	7.95	8.18	8.50	8.06	7.86	+ 4
I _d	5.94	6.46	6.54	6.85	6.45	6.55	+ 17
I _e	5.22	5.76	5.78	6.20	5.78	5.96	+ 19
I _f	4.97	5.47	5.57	5.96	5.59	5.59	+ 20
I _g	4.48	5.26	5.57	5.44	4.95	5.23	+ 22

These results show the upward trend in household prices until 1982, 1983 for industry. They also show that the prices for night heating (D_e) are very close to those for industry.

(i) Price range between countries remains large

Price levels in deflated PPS differ by a factor of one to two in the Community.

For domestic consumers the relative price range, including all taxes between the dearest and cheapest location was as follows:

Standard consumers	D _a	D _b	D _c	D _d	D _e
1980	+ 162	+ 90	+ 83	+ 115	+ 117
1985	+ 129	+ 71	+ 111	+ 109	+ 70

Those for industry, based on the VAT exclusive price were:

Standard consumers	I _a	I _b	I _c	I _d	I _e	I _f	I _g
1980	+ 143	+ 130	+ 97	+ 83	+ 90	+ 145	+ 114
1985	+ 129	+ 104	+ 79	+ 86	+ 98	+ 89	+ 93

These differences result from many factors:

- (i) the origin of the electricity;
- (ii) power station efficiency;
- (iii) the burden of investments;
- (iv) distribution costs;
- (v) tariff policies;
- (vi) operating profits or losses;
- (vii) taxation.

(j) Domestic consumers are more affected by taxes

Because of the great diversity of tax systems the rates of tax imposed on the sales of electricity to domestic users differ enormously.

	(% of tax excl. price)									
	Düs-sel-dorf	Paris	Milan	Rot-ter-dam	Brus-sels	Luxem-bourg	London	Dublin	Copen-hagen	Athens
1980	19	27-30	7- 9	18	16	5	0	0	40-61	8
1985	19	29	10-16	19	17	6	0	0	47-66	11.32

In six countries taxation has increased since 1980. In certain cases (Italy, Denmark) specific taxes are levied per kWh which have a progressive effect. The lower the tax exclusive price of electricity the heavier the tax burden.

Excluding deductible VAT, sales of electricity to commercial and industrial users are hardly taxed:

		(% of tax excl. price)								
	Düsseldorf	Paris	Milan	Rotterdam	Brussels	Luxembourg	London	Dublin	Copenhagen	Athens
1980	5.3	0	1-2	0	0	0	0	0	23-30	0
1985	4.0	0	1-8	0	0	0	0	0	26-32	0

In Denmark the specific tax is deductible along with VAT. It can thus be concluded that taxation has little effect on the price of electricity for non domestic uses.

(k) The price of electricity depends more and more on the time of supply

The difference in the price per kWh according to the season and the time of day is becoming more pronounced. The range extends from cheap kWh rates offered during summer nights to the expensive winter peak rates.

This has led to several consequences:

- (i) increasing tariff complexity (mainly for industry) with different rates according to the time and season. The aim of this is to flatten peak demands and to push consumption towards off peak periods;
- (ii) the introduction of new tariffs with hourly or seasonal variations (e.g. in Italy) or interruptible supply conditions (e.g. France);
- (iii) tariff provisions were introduced or strengthened to protect the very small users, often of modest income whose consumption is during the day with winter peaks, which they cannot change. Such 'social' tariffs exist in France, Italy, Belgium, the United Kingdom and Greece.

(l) Price is more and more influenced by origin

Since the 'energy crisis' proportional costs have risen faster than fixed costs. The production costs, which depend on the origin of the electricity are the chief proportional costs. Increased fuel costs, often linked to crude oil prices have helped to push the price of electricity higher. In recent years vigorous efforts have been made to limit these increases notably by reconversion, often radical, towards other energy sources to produce electricity.

Between 1980 and 1985 we see:

- (i) falling use of petroleum products;
- (ii) massive recourse to solid fuels;

(iii) the development of nuclear power stations in several countries (FR of Germany, France, Belgium).

Throughout, the part played by hydroelectric stations has decreased.

The use of natural gas varies according to price (natural gas usage drops as prices, often linked to petroleum product prices rise, though the opposite is seen in the Netherlands and Ireland).

1984 must be seen as an abnormal year for the UK where the miners strike caused a sharp drop in coal usage to the benefit of fuel oil.

In general recourse to solid fuels has been the most successful measure to check the rising price of electricity.

(m) Spanish and Portuguese electricity prices are comparable with those of the Community

It is interesting to note the prices for the two applicant countries and to compare them with those of the Member States. The prices¹ are shown for the last two years in current ECU and deflated PPS (base 1980).

(ECU/100 kWh)

Standard consumers	January	Spain	Portugal
D _a	1984	9.83	8.14
	1985	11.22	8.90
D _b	1984	9.83	8.95
	1985	11.22	9.96
D _c	1984	7.99	8.02
	1985	8.91	8.90
D _d	1984	7.14	9.15
	1985	7.97	7.75
D _e	1984	6.09	6.11
	1985	6.52	6.51
I _c	1984	7.07	7.01
	1985	8.42	8.06
I _d	1984	6.53	6.36
	1985	7.80	7.14
I _e	1984	5.91	5.92
	1985	7.03	6.53
I _f	1984	5.63	5.92
	1985	6.69	6.53
I _g	1984	5.12	5.54
	1985	6.08	6.06

¹ Which include all taxes (VAT is not levied in either country).

(Deflated PPS/100 kWh)

Standard consumers	January	Spain	Portugal
D _a	1984	10.71	11.03
	1985	10.80	11.15
D _b	1984	10.71	12.12
	1985	10.80	12.47
D _c	1984	8.70	10.86
	1985	8.58	11.15
D _d	1984	7.78	9.68
	1985	7.68	9.70
D _e	1984	6.63	8.28
	1985	6.28	8.16
I _c	1984	7.70	9.49
	1985	8.11	10.10
I _d	1984	7.11	8.61
	1985	7.51	8.94
I _e	1984	6.43	8.02
	1985	6.78	8.18
I _f	1984	6.13	8.02
	1985	6.45	8.18
I _g	1984	5.58	7.50
	1985	5.85	7.59

The values are within the same margins as for Community countries. Spanish prices are very close to the Community average or median. In Portugal prices are higher, nearer the upper limit for the Community. It should also be noted that prices in Portugal rose by around 20% on 12 January and that this is not reflected in the above table.

Furthermore there is a large difference between ECU and purchasing power standard due to the disparity between the rates of exchange for these two units and the national currencies of Spain and Portugal.

The open market exchange rate for the ECU severely underestimates the real purchasing power of the two currencies. For Portugal, the difference is a factor of one to two. For this reason it is preferable to base comparative analyses on prices in deflated PPS which eliminates at a stroke both inflation and the under valuation of the exchange market.

Spain and Portugal will be included in our forthcoming study with a description of the electricity sector, taxes, tariffs and a more in depth analysis of the results.

VII. STATISTISCHER ANHANG

VII. STATISTICAL ANNEX

VII. ANNEXE STATISTIQUE

VII. APPENDICE STATISTICA

NOTE: In the Statistical Annex, the Continental practice of using a comma for the decimal point is adopted.

TABELLEN TABLES TABLEAUX TABELLE

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

B R DEUTSCHLAND

Pf/kWh

Januar Janvier	January Gennaio	Hamburg			Hannover		
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a 600 kWh	1980	31,67	28,03	26,67	33,71	29,83	28,60
	1981	38,30	33,89	32,25	37,84	33,49	32,14
	1982	40,70	36,02	34,40	44,35	39,25	37,74
	1983	40,35	35,71	34,40	44,05	38,98	37,74
	1984	43,86	38,47	37,03	46,51	40,80	39,46
	1985	46,85	41,10	39,55	46,51	40,80	39,46
D _b 1200 kWh	1980	26,03	23,04	21,91	25,46	22,53	21,60
	1981	31,32	27,72	26,38	29,07	25,73	24,69
	1982	33,11	29,30	27,98	33,31	29,48	28,34
	1983	32,82	29,04	27,98	33,08	29,27	28,34
	1984	35,47	31,11	29,95	34,80	30,53	29,52
	1985	37,86	33,21	31,97	34,80	30,53	29,52
D _c 3500 kWh (1)	1980	20,18	17,86	17,00	17,49	15,48	14,84
	1981	24,40	21,59	20,54	20,42	18,07	17,54
	1982	25,68	22,73	21,71	22,98	20,34	19,55
	1983	25,46	22,53	21,71	22,82	20,19	19,55
	1984	27,24	23,89	23,00	23,95	21,01	20,32
	1985	29,01	25,45	24,49	23,95	21,01	20,32
D _d 7500 kWh (2)	1980	16,66	14,74	14,03	.	.	.
	1981	21,52	19,04	18,12	.	.	.
	1982	22,20	19,65	18,76	.	.	.
	1983	22,00	19,47	18,76	.	.	.
	1984	22,82	20,02	19,27	.	.	.
	1985	24,23	21,25	20,46	.	.	.
D _e 20000 kWh (3)	1980	9,79	8,66	8,25	9,15	8,10	7,76
	1981	11,76	10,41	9,90	12,27	10,86	10,42
	1982	13,40	11,86	11,33	13,58	12,02	11,56
	1983	13,81	12,22	11,78	13,49	11,94	11,56
	1984	14,31	12,55	12,09	14,22	11,47	12,07
	1985	14,74	12,93	12,45	14,22	11,47	12,07

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

B R DEUTSCHLAND

Pf/kWh

Januar Janvier	January Gennaio		Düsseldorf			Westliche Gebiete		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a	600 kWh	1980	34,98	30,96	29,40	31,41	27,80	26,40
		1981	38,55	34,12	32,40	32,96	29,17	27,70
		1982	40,26	35,63	34,00	39,79	35,21	33,60
		1983	42,54	37,65	36,20	39,49	34,95	33,60
		1984	45,29	39,73	38,20	41,73	36,61	35,20
		1985	45,29	39,73	38,20	42,68	37,44	36,00
D _b	1200 kWh	1980	25,94	22,96	21,80	24,15	21,37	20,30
		1981	29,51	26,12	24,80	25,70	22,74	21,60
		1982	31,03	27,46	26,20	30,38	26,89	25,65
		1983	32,49	28,75	27,65	30,14	26,67	25,65
		1984	34,38	30,16	29,00	31,89	27,97	26,90
		1985	34,48	30,16	29,00	32,84	28,81	27,70
D _c	3500 kWh (1)	1980	18,32	16,21	15,40	18,04	15,96	15,16
		1981	21,88	19,36	18,39	19,58	17,33	16,46
		1982	23,15	20,49	19,55	23,03	20,38	19,44
		1983	24,42	21,61	20,78	22,85	20,22	19,44
		1984	25,76	22,60	21,73	24,43	21,43	20,61
		1985	25,76	22,60	21,73	25,38	22,26	21,41
D _d	7500 kWh (2)	1980	.	.	.	14,77	13,07	12,41
		1981	.	.	.	16,42	14,53	13,80
		1982	.	.	.	19,22	17,01	16,23
		1983	.	.	.	19,07	16,88	16,23
		1984	.	.	.	20,49	17,97	17,29
		1985	.	.	.	21,36	18,74	18,02
D _e	20000 kWh (3)	1980	10,11	8,95	8,50	9,32	8,25	7,83
		1981	11,97	10,59	10,06	10,85	9,60	9,12
		1982	13,11	11,60	11,07	12,87	11,39	10,87
		1983	13,32	11,79	11,33	12,77	11,30	10,87
		1984	14,06	12,33	11,86	13,97	12,25	11,78
		1985	14,06	12,33	11,86	14,44	12,67	12,18

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
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(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

			B R DEUTSCHLAND					
			Frankfurt/Main			Stuttgart		
Januar	January		Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern
Janvier	Gennaio		Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes
			Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes
			Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse
D _a	600 kWh	1980	34,35	30,40	29,20	36,78	32,55	31,30
		1981	35,61	31,51	30,30	41,01	36,29	34,90
		1982	43,52	38,51	37,10	43,59	38,58	37,20
		1983	45,13	39,94	38,70	44,97	39,80	38,60
		1984	45,53	39,94	38,70	47,88	42,00	40,70
		1985	47,22	41,42	40,10	50,07	43,92	42,60
D _b	1200 kWh	1980	26,11	23,11	22,20	27,50	24,34	23,40
		1981	27,38	24,23	23,30	30,91	27,35	26,30
		1982	33,20	29,38	28,30	33,04	29,24	28,20
		1983	34,29	30,35	29,40	34,25	30,31	29,40
		1984	34,59	30,34	29,40	36,29	31,83	30,85
		1985	35,80	31,40	30,40	37,96	33,30	32,30
D _c	3500 kWh (1)	1980	18,90	16,73	16,07	18,93	16,75	16,11
		1981	20,13	17,81	17,13	21,29	18,84	18,11
		1982	23,96	21,20	20,42	22,74	20,13	19,41
		1983	24,71	21,87	21,19	23,83	21,09	20,45
		1984	24,93	21,87	21,19	25,11	22,03	21,34
		1985	25,59	22,45	21,73	26,39	23,15	22,45
D _d	7500 kWh (2)	1980	.	.	.	.	.	.
		1981	.	.	.	.	.
		1982	.	.	.	.	.
		1983	.	.	.	.	.
		1984	.	.	.	.	.
		1985	.	.	.	.	.
D _e	20000 kWh (3)	1980	8,88	7,86	7,55	8,83	7,81	7,51
		1981	9,72	8,60	8,27	10,54	9,33	8,97
		1982	11,38	10,07	9,70	11,44	10,12	9,76
		1983	11,70	10,35	10,03	12,52	11,08	10,75
		1984	11,97	10,50	10,18	12,88	11,30	10,95
		1985	12,14	10,65	10,31	13,18	11,56	11,22

(1) darunter 1 300 kWh Nachtverbrauch
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ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

B R DEUTSCHLAND

		Pf/kWh						
		München			Südliche Gebiete			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	600 kWh	1980	34,43	30,47	29,30	35,14	31,10	29,90
		1981	37,61	33,28	32,00	35,14	31,10	29,90
		1982	45,20	40,00	38,50	44,97	39,79	38,30
		1983	44,90	39,73	38,50	44,66	39,52	38,30
		1984	46,24	40,56	39,30	46,24	40,56	39,30
		1985	46,28	40,60	39,30	46,28	40,60	39,30
D _b	1200 kWh	1980	26,62	23,56	22,65	27,03	23,92	23,00
		1981	28,85	25,53	24,55	27,03	23,92	23,00
		1982	34,81	30,81	29,65	34,69	30,70	29,55
		1983	34,58	30,60	29,65	34,46	30,50	29,55
		1984	35,65	31,27	30,30	35,65	31,27	30,30
		1985	35,68	31,30	30,30	35,68	31,30	30,30
D _c	3500 kWh (1)	1980	20,14	17,82	17,14	20,53	18,17	17,47
		1981	21,83	19,32	18,57	20,53	18,17	17,47
		1982	26,28	23,26	22,39	25,92	22,94	22,08
		1983	26,11	23,11	22,39	25,75	22,79	22,08
		1984	27,03	23,71	22,97	26,72	23,44	22,71
		1985	27,05	23,73	22,97	26,74	23,46	22,71
D _d	7500 kWh (2)	1980	.	.	.	16,69	14,77	14,16
		1981	.	.	.	16,64	14,73	14,16
		1982	.	.	.	22,00	19,47	18,74
		1983	.	.	.	21,85	19,34	18,74
		1984	.	.	.	22,65	19,87	19,25
		1985	.	.	.	22,67	19,89	19,25
D _e	20000 kWh (3)	1980	9,86	8,73	8,39	10,68	9,45	9,09
		1981	11,05	9,78	9,41	11,43	10,12	9,72
		1982	14,56	12,88	12,40	15,09	13,35	12,85
		1983	14,46	12,80	12,40	14,99	13,27	12,85
		1984	14,59	12,80	12,40	15,29	13,41	13,00
		1985	14,60	12,81	12,40	15,31	13,43	13,80

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

B R DEUTSCHLAND

Pf/kWh

Januar Janvier	January Gennaio		Hamburg			Hannover								
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse						
I _a	30 000 kWh (30 kW, 1000 h)	1980	/											
		1981												
		1982												
		1983												
		1984												
1985	/													
I _b							50 000 kWh (50 kW, 1000 h)	1980	/					
								1981						
								1982						
								1983						
	1984													
1985	/													
I _c							160 000 kWh (100 kW, 1600 h)	1980	28,71	25,41	24,18	23,81	21,07	20,20
								1981	34,53	30,56	29,08	26,75	23,67	22,72
								1982	35,93	31,80	30,37	30,37	26,88	25,85
								1983	39,26	34,74	33,47	30,17	26,70	25,85
	1984	37,64	33,02	31,78	31,71	27,82		26,90						
1985	37,75	33,11	31,87	31,71	27,82	26,90								
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	20,67	18,29	17,40	18,57	16,43	15,75						
		1981	24,86	22,00	20,93	20,87	18,47	17,73						
		1982	25,88	22,90	21,87	23,71	20,98	20,17						
		1983	28,26	25,01	24,09	23,55	20,84	20,17						
		1984	27,09	23,76	22,87	24,85	21,80	21,08						
1985	26,56	23,30	22,42	24,85	21,80	21,08								
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	16,31	14,43	13,73	14,86	13,15	12,61						
		1981	19,61	17,35	16,51	16,71	14,79	14,19						
		1982	20,41	18,06	17,25	19,15	16,95	16,30						
		1983	22,29	19,73	19,01	19,03	16,84	16,30						
		1984	21,38	18,75	18,05	20,04	17,58	17,00						
1985	21,32	18,70	18,00	20,04	17,58	17,00								
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	15,11	13,37	12,72	14,74	13,04	12,50						
		1981	18,17	16,08	15,30	16,57	14,66	14,07						
		1982	18,90	16,73	15,98	19,00	16,81	16,16						
		1983	20,66	18,28	17,61	18,86	16,69	16,16						
		1984	19,80	17,37	16,72	19,87	17,43	16,86						
1985	21,32	18,70	18,00	19,87	17,43	16,86								
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	/											
		1981												
		1982												
		1983												
		1984												
1985	/													

B R DEUTSCHLAND

PF/kWh

	Januar Janvier	January Gennaio	Düsseldorf			Westliche Gebiete		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
I _a	30 000 kWh (30 kW, 1000 h)	1980	/			24,18	21,40	20,32
		1981				26,87	23,78	22,58
		1982				30,34	26,85	25,62
		1983				30,10	26,64	25,62
		1984				32,15	28,20	27,11
		1985				32,58	28,58	27,48
I _b	50 000 kWh (50 kW, 1000 h)	1980	/			23,39	20,70	19,66
		1981				25,99	23,00	21,84
		1982				29,35	25,97	24,78
		1983				29,12	25,77	24,78
		1984				31,10	27,28	26,23
		1985				31,51	27,64	26,58
I _c	160 000 kWh (100 kW, 1600 h)	1980	22,49	19,90	18,90	20,93	18,52	17,59
		1981	25,05	22,17	21,05	23,26	20,58	19,54
		1982	26,36	23,33	22,26	26,25	23,23	22,17
		1983	26,16	23,15	22,26	26,06	23,06	22,17
		1984	27,93	24,50	23,56	27,83	24,41	23,47
		1985	27,93	24,50	23,56	28,20	24,74	23,79
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	17,76	15,72	14,93	16,60	14,69	13,95
		1981	19,79	17,51	16,63	18,44	16,32	15,50
		1982	20,83	18,43	17,59	20,83	18,43	17,59
		1983	20,67	18,29	17,59	20,67	18,29	17,59
		1984	22,07	19,36	18,62	22,07	19,36	18,62
		1985	22,07	19,36	18,62	22,37	19,62	18,87
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	15,56	13,77	13,08	14,36	12,71	12,07
		1981	17,55	15,53	14,75	16,14	14,28	13,56
		1982	18,57	16,43	15,68	18,45	16,33	15,58
		1983	18,43	16,31	15,68	18,31	16,20	15,58
		1984	19,53	17,13	16,47	19,60	17,19	16,53
		1985	19,53	17,13	16,47	19,85	17,41	16,74
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	14,36	12,71	12,07	13,21	11,69	11,10
		1981	16,22	14,35	13,63	14,79	13,09	12,43
		1982	17,13	15,16	14,47	16,86	14,92	14,24
		1983	17,01	15,05	14,47	16,74	14,81	14,24
		1984	18,01	15,80	15,19	17,90	15,70	15,10
		1985	18,01	15,80	15,19	18,14	15,91	15,30
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	/			/		
		1981						
		1982						
		1983						
		1984						
		1985						

B R DEUTSCHLAND

Pf/kWh

	Januar Janvier	January Gennaio	Frankfurt/Main			Stuttgart		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
I _a 30 000 kWh (30 kW, 1000 h)		1980	/			30,96	27,40	26,35
		1981	/			35,03	31,00	29,81
		1982	/			37,95	33,58	32,38
		1983	/			39,74	35,17	34,11
		1984	/			41,69	36,57	35,44
		1985	/			43,26	37,95	36,81
I _b 50 000 kWh (50 kW, 1000 h)		1980	/			30,96	27,40	26,35
		1981	/			35,03	31,00	29,81
		1982	/			37,95	33,58	32,38
		1983	/			39,74	35,17	34,11
		1984	/			41,69	36,57	35,44
		1985	/			43,26	37,95	36,81
I _c 180 000 kWh (100 kW, 1800 h)		1980	22,92	20,28	19,48	23,93	21,18	20,36
		1981	23,93	21,18	20,37	27,09	23,97	23,05
		1982	27,58	24,41	23,52	29,32	25,95	25,02
		1983	28,66	25,36	24,57	30,77	27,23	26,41
		1984	28,91	25,36	24,57	32,38	28,40	27,52
		1985	29,73	26,08	25,25	33,69	29,55	28,66
I _d 1 260 000 kWh (500 kW, 2500 h)		1980	18,13	16,04	15,40	18,85	16,68	16,04
		1981	18,93	16,75	16,10	21,35	18,89	18,16
		1982	21,81	19,30	18,59	23,06	20,41	19,68
		1983	22,65	20,04	19,42	24,27	21,48	20,83
		1984	22,85	20,04	19,42	25,60	22,46	21,76
		1985	23,51	20,62	19,96	26,72	23,44	22,74
I _e 2 000 000 kWh (500 kW, 4000 h)		1980	14,81	13,11	12,60	15,57	13,78	13,25
		1981	15,48	13,70	13,17	17,53	15,51	14,91
		1982	17,83	15,78	15,20	19,01	16,82	16,22
		1983	18,50	16,39	15,88	19,99	17,69	17,16
		1984	18,68	16,39	15,88	21,09	18,50	17,93
		1985	19,22	16,86	16,32	21,96	19,26	18,69
I _f 10 000 000 kWh (2500 kW, 4000 h)		1980	14,17	12,54	12,05	14,55	12,88	12,39
		1981	14,79	13,09	12,59	16,28	14,41	13,86
		1982	17,05	15,09	14,54	17,70	15,66	15,10
		1983	17,72	15,68	15,19	18,66	16,51	16,01
		1984	17,88	15,68	15,19	19,70	17,28	16,75
		1985	18,38	16,12	15,61	20,62	18,09	17,55
I _g 24 000 000 kWh (4000 kW, 6000 h)		1980	/			/		
		1981	/			/		
		1982	/			/		
		1983	/			/		
		1984	/			/		
		1985	/			/		

B R DEUTSCHLAND

Pf/kWh

Januar Janvier	January Gennaio		München			Südliche Gebiete		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
I _a	30 000 kWh (30 kW, 1000 h)	1980	30,11	26,65	25,63	/		
		1981	32,24	28,53	27,43			
		1982	37,61	33,28	32,03			
		1983	37,35	33,05	32,02			
		1984	38,95	34,17	33,11			
		1985	38,99	34,20	33,11			
I _b	50 000 kWh (50 kW, 1000 h)	1980	30,11	26,65	25,63	/		
		1981	32,24	28,53	27,43			
		1982	37,61	33,28	32,03			
		1983	37,35	33,05	32,02			
		1984	38,95	34,17	33,11			
		1985	38,99	34,20	33,11			
I _c	160 000 kWh (100 kW, 1600 h)	1980	22,72	20,11	19,34	22,48	19,89	19,13
		1981	24,30	21,50	20,67	22,48	19,89	19,13
		1982	28,63	25,34	24,39	28,58	25,29	24,34
		1983	28,44	25,17	24,39	28,39	25,12	24,34
		1984	29,80	26,14	25,33	29,53	25,90	25,10
		1985	29,83	26,17	25,33	29,57	25,94	25,10
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	18,14	16,05	15,43	17,84	15,79	15,18
		1981	19,39	17,16	16,50	17,84	15,79	15,18
		1982	23,06	20,41	19,64	23,05	20,40	19,63
		1983	22,91	20,27	19,64	22,89	20,26	19,63
		1984	24,11	21,15	20,49	23,83	20,90	20,25
		1985	24,13	21,17	20,49	23,85	20,92	20,25
I _e	2 000 000 kWh • (500 kW, 4000 h)	1980	14,18	12,55	12,07	15,03	13,30	12,79
		1981	15,12	13,38	12,87	15,03	13,30	12,79
		1982	18,52	16,39	15,77	19,56	17,31	16,66
		1983	18,66	16,51	16,00	19,42	17,19	16,66
		1984	19,73	17,31	16,77	20,22	17,74	17,19
		1985	19,74	17,32	16,77	20,25	17,76	17,19
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	13,89	12,29	11,82	14,09	12,47	11,99
		1981	14,80	13,10	12,60	14,09	12,47	11,99
		1982	18,16	16,07	15,47	18,90	16,73	16,10
		1983	18,29	16,19	15,69	18,78	16,62	16,10
		1984	19,37	16,99	16,46	19,56	17,16	16,63
		1985	19,38	17,00	16,46	19,60	17,19	16,63
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	.	.	.	11,98	10,60	10,19
		1981	.	.	.	12,02	10,64	10,19
		1982	.	.	.	16,49	14,59	14,04
		1983	.	.	.	16,37	14,49	14,04
		1984	.	.	.	17,20	15,09	14,62
		1985	.	.	.	17,21	15,10	14,62

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

FRANCE

Centimes/kWh

Januar Janvier	January Gennaio	Paris			Lille		
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a 800 kWh	1980	78,87	68,04	61,54	76,81	65,98	61,54
	1981	82,17	70,89	64,12	80,02	68,74	64,12
	1982	93,76	80,89	73,16	91,30	78,43	73,16
	1983	102,19	87,47	79,12	99,53	84,82	79,12
	1984	108,24	92,65	83,80	105,42	89,83	83,80
	1985	104,23	89,22	80,70	101,52	86,51	80,70
D _b 1200 kWh	1980	57,72	49,80	45,04	56,21	48,28	45,04
	1981	60,57	52,25	47,26	58,98	50,66	47,26
	1982	69,15	59,65	53,95	67,33	57,83	53,95
	1983	78,36	67,08	60,67	76,32	65,04	60,67
	1984	84,01	71,91	65,04	81,63	69,72	65,04
	1985	87,90	75,24	68,05	85,61	72,95	68,05
D _c 3500 kWh (1)	1980	46,58	40,18	36,34	45,36	38,96	36,34
	1981	48,89	42,18	38,15	47,61	40,90	38,15
	1982	56,60	48,83	44,17	55,12	47,35	44,17
	1983	64,76	55,43	50,14	63,08	53,75	50,14
	1984	73,18	62,64	56,66	71,28	60,74	56,66
	1985	77,27	66,14	59,82	75,26	64,13	59,82
D _d 7500 kWh (2)	1980	42,77	36,90	33,38	41,65	35,38	33,38
	1981	45,06	38,87	35,16	43,88	37,69	35,16
	1982	52,30	45,12	40,81	50,93	43,75	40,81
	1983	59,95	51,32	46,42	58,39	49,76	46,42
	1984	68,12	58,31	52,74	66,35	56,54	52,74
	1985	72,07	61,69	55,80	70,20	59,82	55,80
D _e 20000 kWh (3)	1980	33,98	29,31	26,51	33,09	28,42	26,51
	1981	35,74	30,83	27,89	34,81	29,90	27,89
	1982	41,75	36,01	32,57	40,65	34,92	32,57
	1983	47,88	40,99	37,07	46,63	39,74	37,07
	1984	54,40	46,57	42,12	52,98	45,15	42,12
	1985	57,62	49,32	44,61	56,12	47,82	44,61

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

FRANCE

		Centimes/kWh						
		Lyon			Marseille			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	600 kWh	1980	76,31	65,48	61,54	78,28	67,45	61,54
		1981	79,51	68,22	64,12	81,56	70,28	64,12
		1982	90,72	77,84	73,16	93,06	80,18	73,16
		1983	98,90	84,18	79,12	101,43	86,72	79,12
		1984	104,75	89,16	83,80	107,43	91,84	83,80
		1985	100,87	85,86	80,70	103,46	88,45	80,70
D _b	1200 kWh	1980	55,85	47,92	45,04	57,29	49,36	45,04
		1981	58,60	50,28	47,26	60,11	51,80	47,26
		1982	66,90	57,40	53,95	68,62	59,13	53,95
		1983	75,84	64,55	60,67	77,78	66,49	60,67
		1984	81,30	69,20	65,04	83,38	71,28	65,04
		1985	85,07	72,41	68,05	87,24	74,58	68,05
D _c	3500 kWh (1)	1980	45,07	38,67	36,34	46,23	38,67	36,34
		1981	47,31	40,59	38,15	48,53	41,81	38,15
		1982	54,77	47,00	44,17	56,18	48,41	44,17
		1983	62,68	53,35	50,14	64,28	54,95	50,14
		1984	70,83	60,29	56,66	72,64	62,10	56,66
		1985	74,78	63,65	59,82	76,69	65,56	59,82
D _d	7500 kWh (2)	1980	41,39	35,52	33,38	42,45	36,58	33,38
		1981	43,60	37,41	35,16	44,73	38,54	35,16
		1982	50,60	43,42	40,81	51,91	44,73	40,81
		1983	58,02	49,39	46,42	59,51	50,88	46,42
		1984	65,93	56,12	52,74	67,61	57,80	52,74
		1985	69,75	59,37	55,80	71,54	61,16	55,80
D _e	20000 kWh (3)	1980	32,88	28,21	26,51	33,72	28,21	26,51
		1981	34,58	29,67	27,89	35,48	30,57	27,89
		1982	40,39	34,65	32,57	41,43	35,70	32,57
		1983	46,34	39,44	37,07	47,52	40,63	37,07
		1984	52,65	44,82	42,12	53,99	46,16	42,12
		1985	55,77	47,47	44,61	57,19	48,89	44,61

- (1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

- (1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

- (1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

- (1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

FRANCE

Centimes/kWh

Januar Janvier	January Gennaio		Toulouse			Strasbourg		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a	600 kWh	1980	77,30	66,47	61,54	74,34	63,60	61,54
		1981	80,53	69,25	64,12	77,46	66,17	64,12
		1982	91,89	79,01	73,16	88,38	75,50	73,16
		1983	100,17	85,45	79,12	96,37	81,65	79,12
		1984	106,09	90,50	83,80	102,07	86,48	83,80
		1985	102,17	87,16	80,70	98,29	83,28	80,70
D _b	1200 kWh	1980	56,57	48,64	45,04	54,41	46,48	45,04
		1981	59,36	51,04	47,26	57,09	48,77	47,26
		1982	67,76	58,27	53,95	65,18	55,68	53,95
		1983	76,81	65,52	60,67	73,89	62,61	60,67
		1984	82,34	70,24	65,04	79,22	67,12	65,04
		1985	86,15	73,49	68,05	82,89	70,23	68,05
D _c	3500 kWh (1)	1980	45,65	39,25	36,34	43,90	37,50	36,34
		1981	47,92	41,20	38,15	46,08	39,37	38,15
		1982	55,48	47,70	44,17	53,35	45,58	44,17
		1983	63,48	54,15	50,14	61,07	51,74	50,14
		1984	71,73	61,19	56,66	69,01	58,47	56,66
		1985	75,74	64,59	59,82	72,86	61,73	59,82
D _d	7500 kWh (2)	1980	41,92	36,05	33,38	40,32	34,45	33,38
		1981	44,16	37,97	35,16	42,48	36,29	35,16
		1982	51,25	44,07	40,81	49,30	42,12	40,81
		1983	58,76	50,13	46,42	56,54	47,91	46,42
		1984	66,77	56,96	52,74	64,24	54,43	52,74
		1985	70,64	60,26	55,80	67,97	57,59	55,80
D _e	20000 kWh (3)	1980	33,30	28,63	26,51	32,03	27,36	26,51
		1981	35,03	30,12	27,89	33,69	28,78	27,89
		1982	40,91	35,18	32,57	39,34	33,61	32,57
		1983	46,93	40,04	37,07	45,16	38,26	37,07
		1984	53,32	45,49	42,12	51,30	43,47	41,12
		1985	56,48	48,18	44,61	54,34	46,04	44,61

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

FRANCE

		Centimes/kWh					
		Paris—Lille—Lyon—Strasbourg—Marseille—Toulouse					
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse
I _a		1980	46,03	39,14	39,14		
	30 000 kWh (30 kW, 1000 h)	1981	48,47	41,22	41,22		
		1982	55,66	47,33	47,33		
		1983	64,93	54,75	54,75		
		1984	87,87	74,09	74,09		
		1985	92,59	78,07	78,07		
I _b		1980	46,03	39,14	39,14		
	50 000 kWh (50 kW, 1000 h)	1981	48,47	41,22	41,22		
		1982	55,66	47,33	47,33		
		1983	64,93	54,75	54,75		
		1984	80,62	67,98	67,98		
		1985	84,08	70,89	70,89		
I _c		1980	39,41	33,51	33,51		
	160 000 kWh (100 kW, 1600 h)	1981	41,70	35,46	35,46		
		1982	48,46	41,21	41,21		
		1983	58,56	49,38	49,38		
		1984	64,67	54,53	54,53		
		1985	67,84	57,20	57,20		
I _d		1980	32,79	27,88	27,88		
	1 250 000 kWh (500 kW, 2500 h)	1981	34,89	29,67	29,67		
		1982	40,36	34,32	34,32		
		1983	46,55	39,25	39,25		
		1984	52,31	44,11	44,11		
		1985	55,84	47,08	47,08		
I _e		1980	28,34	24,10	24,10		
	2 000 000 kWh (500 kW, 4000 h)	1981	30,25	25,72	25,72		
		1982	34,67	29,48	29,48		
		1983	39,43	33,25	33,25		
		1984	43,80	36,93	36,93		
		1985	45,78	38,60	38,60		
I _f		1980	27,92	23,74	23,74		
	10 000 000 kWh (2500 kW, 4000 h)	1981	29,81	25,35	25,35		
		1982	34,14	29,03	29,03		
		1983	38,79	32,71	32,71		
		1984	43,35	36,51	36,51		
		1985	45,78	38,60	38,60		
I _g		1980	23,96	20,37	20,37		
	24 000 000 kWh (4000 kW, 6000 h)	1981	25,71	21,86	21,86		
		1982	29,24	24,86	24,86		
		1983	32,88	27,72	27,72		
		1984	36,59	30,85	30,85		
		1985	38,07	32,10	32,10		

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

ITALIA

LIT/kWh

Januar Janvier	January Gennaio		Settentrionale e Centrale			Meridionale e Insulare		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a	600 kWh	1980	50,40	47,55	46,45	49,82	47,00	46,45
		1981	61,51	56,95	55,85	60,91	56,40	55,85
		1982	77,56	72,00	70,90	77,17	71,45	70,90
		1983	97,96	90,71	89,60	97,36	90,15	89,60
		1984	102,38	94,80	93,70	101,79	94,25	93,70
		1985	112,71	103,40	102,30	112,11	102,85	102,30
D _b	1200 kWh	1980	56,23	53,05	51,95	55,65	52,50	51,95
		1981	70,71	65,48	64,38	70,12	64,93	64,38
		1982	87,22	80,76	79,66	86,63	80,21	79,66
		1983	113,79	105,36	101,76	113,19	104,81	101,76
		1984	129,44	119,85	116,00	128,84	119,30	116,00
		1985	140,28	128,70	124,60	139,68	128,15	124,60
D _c	3500 kWh (1)	1980	93,40	88,11	87,01	92,82	87,57	87,01
		1981	114,16	105,70	104,60	113,56	105,15	104,60
		1982	131,55	121,81	120,71	130,96	121,26	120,71
		1983	172,44	159,67	148,57	171,85	159,12	148,57
		1984	231,60	214,44	202,34	231,00	213,89	202,34
		1985	246,66	226,29	213,19	246,06	225,74	213,19
D _d	7500 kWh (2)	1980	85,99	81,12	80,02	85,40	80,57	80,02
		1981	105,34	97,54	96,44	104,75	96,99	96,44
		1982	122,56	113,48	112,38	121,96	112,93	112,38
		1983	151,07	139,88	138,78	150,48	139,33	138,78
		1984	216,36	200,33	188,23	215,76	199,78	188,23
		1985	231,28	212,18	199,08	230,68	211,63	199,08
D _e	20000 kWh (3)	1980						
		1981						
		1982						
		1983						
		1984						
		1985						

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ITALIA

LIT/kWh

Januar Janvier Gennaio	January Gennaio	Settentrionale e Centrale			Meridionale e Insulare			
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	83,74	73,46	72,61	62,44	54,77	54,36
		1981	100,64	92,73	91,63	81,85	71,18	70,63
		1982	125,41	109,05	107,95	99,87	86,84	86,29
		1983	173,52	147,05	137,95	147,04	124,61	116,06
		1984	217,56	184,37	174,27	181,55	153,86	144,31
		1985	252,68	231,82	220,72	210,99	193,57	183,02
I _b	50 000 kWh (50 kW, 1000 h)	1980	88,92	78,00	77,16	88,44	77,57	77,16
		1981	111,36	96,83	95,73	110,72	96,28	95,73
		1982	130,12	113,15	112,05	129,49	112,60	112,05
		1983	173,52	147,05	137,95	172,87	146,50	137,95
		1984	193,35	163,86	153,76	192,71	163,31	153,76
		1985	224,76	206,20	195,10	224,16	205,65	195,10
I _c	160 000 kWh (100 kW, 1600 h)	1980	78,71	69,04	68,60	78,46	68,22	68,60
		1981	99,62	86,63	85,53	98,99	86,08	85,53
		1982	113,69	98,86	97,76	113,06	98,31	97,76
		1983	152,70	129,41	120,31	152,05	128,86	120,31
		1984	168,76	143,02	132,92	168,11	142,47	132,92
		1985	212,41	180,01	168,91	211,76	179,46	168,91
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	65,21	57,20	56,80	64,98	57,00	56,80
		1981	82,82	72,01	70,91	82,18	71,46	70,91
		1982	100,47	87,36	86,26	99,83	86,81	86,26
		1983	135,87	115,14	106,04	135,22	114,59	106,04
		1984	148,88	126,17	116,07	148,23	125,62	116,07
		1985	181,57	153,87	143,22	181,45	153,77	143,22
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	60,92	53,44	53,04	60,69	53,24	53,04
		1981	77,76	67,62	66,52	77,13	67,07	66,52
		1982	95,25	82,83	81,73	94,62	82,28	81,73
		1983	129,17	109,47	100,37	128,53	108,92	100,37
		1984	141,00	119,49	109,39	140,35	118,94	109,39
		1985	158,32	134,17	123,52	158,20	134,07	123,52
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	58,10	50,96	50,64	57,91	50,80	50,64
		1981	74,15	64,48	63,72	73,71	64,10	63,72
		1982	91,52	79,59	78,83	91,09	79,21	78,83
		1983	114,94	97,41	96,65	114,50	97,03	96,65
		1984	124,90	105,85	105,09	124,45	105,47	105,09
		1985	147,33	124,86	124,10	146,89	124,48	124,10
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	52,28	45,86	45,55	52,11	45,71	45,55
		1981	66,73	58,03	57,72	66,56	57,88	57,72
		1982	85,36	74,23	73,53	84,95	73,87	73,53
		1983	106,77	90,48	89,78	106,34	90,12	89,78
		1984	116,44	97,68	96,98	114,84	97,32	96,98
		1985	109,01	92,38	91,68	108,58	92,02	91,68

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

NEDERLAND

		cents/kWh						
		Rotterdam			Noord-Holland			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	600 kWh	1980	31,86	27,00	27,00	29,85	25,30	25,30
		1981	34,57	29,30	29,30	32,45	27,50	27,50
		1982	39,18	33,20	33,20	35,90	31,30	31,30
		1983	40,95	34,70	34,70	37,88	32,10	32,10
		1984	40,82	34,30	34,30	38,71	32,53	32,53
		1985	41,65	35,00	35,00	41,19	34,61	34,61
D _b	1200 kWh	1980	26,31	22,30	22,30	26,55	22,50	22,50
		1981	29,03	24,60	24,60	29,15	24,70	24,70
		1982	33,51	28,40	28,40	33,15	28,55	28,55
		1983	34,93	29,60	29,60	33,75	28,60	28,60
		1984	34,57	29,05	29,05	34,55	29,03	29,03
		1985	35,40	29,75	29,75	36,28	30,49	30,49
D _c	3500 kWh (1)	1980	20,88	17,69	17,69	22,44	19,00	19,00
		1981	23,79	20,16	20,16	24,66	20,90	20,90
		1982	28,39	24,06	24,06	28,83	24,71	24,71
		1983	29,58	25,07	25,07	28,76	24,37	24,37
		1984	29,04	24,40	24,40	29,51	24,80	24,80
		1985	29,88	25,11	25,11	31,02	26,07	26,07
D _d	7500 kWh (2)	1980	19,61	16,62	16,62	21,12	17,90	17,90
		1981	22,42	19,00	19,00	23,98	20,30	20,30
		1982	26,89	22,79	22,79	28,46	24,12	24,12
		1983	27,42	23,04	23,04	27,85	23,60	23,60
		1984	27,42	23,04	23,04	28,55	23,99	23,99
		1985	28,25	23,74	23,74	29,88	25,11	25,11
D _e	20000 kWh (3)	1980	15,61	13,23	13,23	19,58	16,60	16,60
		1981	18,36	15,56	15,56	19,82	16,80	16,80
		1982	22,77	19,30	19,30	24,23	20,61	20,61
		1983	23,86	20,22	20,22	25,32	21,46	21,46
		1984	23,15	19,45	19,45	26,05	21,89	21,89
		1985	23,98	20,15	20,15	27,86	23,41	23,41

- (1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

- (1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

- (1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

- (1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

		NEDERLAND			IRELAND			
		Cents/kWh			P/kWh			
		Noord-Brabant			Dublin			
Januar	January	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
Janvier	Gennaio							
D _a	600 kWh	1980	29,03	24,60	24,60	5,232	5,232	5,232
		1981	29,50	25,00	25,00	7,152	7,152	7,152
		1982	35,05	29,70	29,70	8,877	8,877	8,877
		1983	35,52	30,10	30,10	9,350	9,350	9,350
		1984	34,63	29,10	29,10	10,300	10,300	10,300
		1985	35,11	29,50	29,50	11,050	11,050	11,050
D _b	1200 kWh	1980	22,77	19,30	19,30	4,332	4,332	4,332
		1981	23,25	19,70	19,70	6,076	6,076	6,076
		1982	28,56	24,20	24,20	7,627	7,627	7,627
		1983	28,85	24,45	24,45	8,025	8,025	8,025
		1984	27,91	23,45	23,45	8,825	8,825	8,825
		1985	28,38	23,85	23,85	9,450	9,450	9,450
D _c	3500 kWh (1)	1980	17,79	15,08	15,08	3,228	3,228	3,228
		1981	18,28	15,49	15,49	4,686	4,686	4,686
		1982	23,40	19,83	19,83	5,911	5,911	5,911
		1983	23,45	19,87	19,87	5,951	5,951	5,951
		1984	22,41	18,83	18,83	6,474	6,474	6,474
		1985	22,89	19,23	19,23	6,913	6,913	6,913
D _d	7500 kWh (2)	1980	16,44	13,93	13,93	3,330	3,330	3,330
		1981	16,88	14,30	14,30	4,600	4,600	4,600
		1982	21,92	18,57	18,57	5,790	5,790	5,790
		1983	21,92	18,58	18,58	5,832	5,832	5,832
		1984	20,88	17,55	17,55	6,346	6,346	6,346
		1985	21,36	17,95	17,95	6,770	6,770	6,770
D _e	20000 kWh (3)	1980	13,83	11,72	11,72	2,465	2,465	2,465
		1981	14,15	11,99	11,99	3,702	3,702	3,702
		1982	18,99	16,09	16,09	4,651	4,651	4,651
		1983	18,77	15,91	15,91	4,350	4,350	4,350
		1984	17,65	14,83	14,83	4,649	4,649	4,649
		1985	18,12	15,23	15,23	4,946	4,946	4,946

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

NEDERLAND

		cents/kWh						
Januar Janvier	January Gennaio	Rotterdam			Noord-Holland			
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	30,96	26,24	26,24	25,25	21,40	21,40
		1981	31,97	27,09	27,09	28,68	24,31	24,31
		1982	36,33	30,79	30,79	33,02	27,98	27,98
		1983	35,20	29,83	29,83	34,96	29,63	29,63
		1984	36,15	30,38	30,38	36,82	30,94	30,94
		1985	37,19	31,25	31,25	40,72	34,22	34,22
I _b	50 000 kWh (50 kW, 1000 h)	1980	30,17	25,57	25,57	24,99	21,18	21,18
		1981	31,97	27,09	27,09	28,41	24,07	24,07
		1982	36,33	30,79	30,79	32,74	27,75	27,75
		1983	35,20	29,83	29,83	33,91	28,74	28,74
		1984	36,15	30,38	30,38	35,97	30,23	30,23
		1985	35,74	30,03	30,03	39,85	33,49	33,49
I _c	160 000 kWh (100 kW, 1600 h)	1980	25,43	21,55	21,55	22,88	19,39	19,39
		1981	27,49	23,30	23,30	26,15	22,16	22,16
		1982	33,34	28,25	28,25	30,21	25,60	25,60
		1983	32,10	27,20	27,20	30,79	26,09	26,09
		1984	29,26	24,59	24,59	33,30	27,98	27,98
		1985	30,18	25,36	25,36	32,95	27,69	27,69
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	19,73	16,72	16,72	19,42	16,46	16,46
		1981	22,79	19,31	19,31	22,47	19,04	19,04
		1982	27,61	23,40	23,40	26,42	22,39	22,39
		1983	25,96	22,00	22,00	26,30	22,29	22,29
		1984	25,17	21,15	21,15	27,12	22,79	22,79
		1985	28,10	23,61	23,61	27,77	23,34	23,34
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	17,33	14,69	14,69	17,12	14,51	14,51
		1981	20,23	17,14	17,14	20,11	17,04	17,04
		1982	24,97	21,16	21,16	23,99	20,33	20,33
		1983	23,31	19,75	19,75	23,62	20,02	20,02
		1984	23,11	19,42	19,42	24,40	20,50	20,50
		1985	26,03	21,87	21,87	24,79	20,83	20,83
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	17,13	14,52	14,52	16,50	13,98	13,98
		1981	19,02	16,12	16,12	19,47	16,50	16,50
		1982	24,31	20,60	20,60	23,33	19,77	19,77
		1983	22,93	19,43	19,43	22,70	19,24	19,24
		1984	22,99	19,32	19,32	23,42	19,68	19,68
		1985	24,10	20,25	20,25	21,88	18,39	18,39
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	15,67	13,28	13,28	14,90	12,63	12,63
		1981	17,51	14,84	14,84	17,84	15,12	15,12
		1982	22,64	19,19	19,19	21,18	17,95	17,95
		1983	19,67	16,67	16,67	18,96	16,07	16,07
		1984	19,56	16,44	16,44	19,27	16,19	16,19
		1985	20,47	17,20	17,20	20,18	16,96	16,96

ELEKTRIZITÄTSPREISE FÜR DIE INDUSTRIE
ELECTRICITY PRICES FOR INDUSTRY

PRIX DE L'ÉLECTRICITÉ POUR USAGES INDUSTRIELS
PREZZI DELL'ENERGIA ELETTRICA PER USI INDUSTRIALI

		NEDERLAND			IRELAND			
		cents/kWh			P/kWh			
		Noord-Brabant			Dublin			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	25,17	21,33	21,33	5,320	5,320	5,320
		1981	25,70	21,78	21,78	7,835	7,835	7,835
		1982	31,86	27,00	27,00	9,711	9,711	9,711
		1983	31,51	26,70	26,70	9,653	9,653	9,653
		1984	30,58	25,70	25,70	10,129	10,129	10,129
		1985	31,12	26,15	26,15	10,633	10,633	10,633
I _b	50 000 kWh (50 kW, 1000 h)	1980	24,13	20,45	20,45	5,320	5,320	5,320
		1981	24,66	20,90	20,90	7,835	7,835	7,835
		1982	30,92	26,20	26,20	9,711	9,711	9,711
		1983	30,56	25,90	25,90	9,653	9,653	9,653
		1984	29,63	24,90	24,90	10,129	10,129	10,129
		1985	29,87	25,10	25,10	10,633	10,633	10,633
I _c	160 000 kWh (100 kW, 1600 h)	1980	16,64	14,10	14,10	4,236	4,236	4,236
		1981	17,03	14,43	14,43	6,314	6,314	6,314
		1982	21,64	18,34	18,34	7,937	7,937	7,937
		1983	21,52	18,24	18,24	7,916	7,916	7,916
		1984	20,49	17,22	17,22	8,374	8,374	8,374
		1985	20,91	17,57	17,57	8,790	8,790	8,790
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	14,24	12,07	12,07	3,299	3,299	3,299
		1981	14,58	12,36	12,36	4,938	4,938	4,938
		1982	19,13	16,21	16,21	6,271	6,271	6,271
		1983	18,96	16,07	16,07	6,283	6,283	6,283
		1984	17,89	15,03	15,03	6,690	6,690	6,690
		1985	18,31	15,39	15,39	6,933	6,933	6,933
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	12,77	10,82	10,82	2,852	2,852	2,852
		1981	13,10	11,10	11,10	4,327	4,327	4,327
		1982	17,58	14,90	14,90	5,539	5,539	5,539
		1983	17,39	14,74	14,74	5,514	5,514	5,514
		1984	16,27	13,67	13,67	5,903	5,903	5,903
		1985	16,68	14,02	14,02	6,098	6,098	6,098
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	12,72	10,78	10,78	2,847	2,847	2,847
		1981	13,04	11,05	11,05	4,238	4,238	4,238
		1982	17,35	14,86	14,86	5,428	5,428	5,428
		1983	17,33	14,69	14,69	5,406	5,406	5,406
		1984	16,21	13,62	13,62	5,785	5,785	5,785
		1985	16,64	13,98	13,98	5,932	5,932	5,932
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	11,70	9,91	9,91	2,590	2,590	2,590
		1981	12,00	10,17	10,17	3,900	3,900	3,900
		1982	16,46	13,95	13,95	5,012	5,012	5,012
		1983	15,79	13,38	13,38	5,003	5,003	5,003
		1984	14,60	12,27	12,27	5,291	5,291	5,291
		1985	14,99	12,60	12,60	5,360	5,360	5,360

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

		BELGIQUE/BELGIË			GRAND-DUCHÉ DE LUXEMBOURG			
		BFR/kWh			LFR/kWh			
		Bruxelles			Luxembourg			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWSt.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWSt.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	800 kWh	1980	6,36	5,48	5,48	4,68	4,46	4,46
		1981	6,90	5,95	5,95	5,05	4,81	4,81
		1982	7,57	6,47	6,47	6,16	5,87	5,87
		1983	8,72	7,45	7,45	6,83	6,50	6,50
		1984	9,23	7,89	7,89	7,94	7,49	7,49
		1985	8,86	7,57	7,57	8,09	7,63	7,63
D _b	1200 kWh	1980	4,96	4,28	4,28	3,70	3,53	3,53
		1981	5,48	4,72	4,72	4,01	3,82	3,82
		1982	6,05	5,17	5,17	4,57	4,35	4,35
		1983	6,97	5,96	5,96	5,08	4,84	4,84
		1984	7,30	6,24	6,24	5,94	5,60	5,60
		1985	7,64	6,53	6,53	6,04	5,70	5,70
D _c	3500 kWh (1)	1980	3,51	3,03	3,03	2,61	2,49	2,49
		1981	3,96	3,41	3,41	2,82	2,68	2,68
		1982	4,41	3,77	3,77	3,30	3,14	3,14
		1983	5,10	4,36	4,36	3,57	3,40	3,40
		1984	5,27	4,50	4,50	4,15	3,92	3,92
		1985	5,53	4,73	4,73	4,23	3,99	3,99
D _d	7500 kWh (2)	1980	3,24	2,79	2,79	2,06	1,96	1,96
		1981	3,69	3,18	3,18	2,25	2,14	2,14
		1982	4,12	3,52	3,52	3,03	2,88	2,88
		1983	4,76	4,07	4,07	3,47	3,31	3,31
		1984	4,90	4,19	4,19	4,07	3,84	3,84
		1985	5,10	4,36	4,36	4,15	3,91	3,91
D _e	20000 kWh (3)	1980	2,26	1,95	1,95	1,52	1,45	1,45
		1981	2,64	2,28	2,28	1,66	1,58	1,58
		1982	3,00	2,56	2,56	2,12	2,02	2,02
		1983	3,47	2,97	2,97	2,34	2,23	2,23
		1984	3,51	3,00	3,00	2,75	2,59	2,59
		1985	3,56	3,04	3,04	2,80	2,64	2,64

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

		BELGIQUE/BELGIË			GRAND-DUCHE DE LUXEMBOURG			LF/kWh
Januar Janvier	January Gennaio	Bruxelles			Luxembourg 0 % *			
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	4,00	3,45	3,45	3,10	2,95	2,95
		1981	4,38	3,78	3,78	3,48	3,31	3,31
		1982	4,70	4,02	4,02	5,39	5,14	5,14
		1983	5,51	4,71	4,71	6,13	5,84	5,84
		1984	5,81	4,97	4,97	7,33	6,91	6,91
		1985	5,90	5,04	5,04	7,43	7,01	7,01
I _b	50 000 kWh (50 kW, 1000 h)	1980	4,00	3,45	3,45	3,07	2,92	2,92
		1981	4,38	3,78	3,78	3,44	3,28	3,28
		1982	4,70	4,02	4,02	5,35	5,10	5,10
		1983	5,51	4,71	4,71	6,08	5,79	5,79
		1984	5,81	4,91	4,91	7,28	6,87	6,87
		1985	5,92	5,02	5,02	7,40	6,98	6,98
I _c	160 000 kWh (100 kW, 1600 h)	1980	3,72	3,21	3,21	2,58	2,46	2,46
		1981	4,11	3,54	3,54	2,91	2,77	2,77
		1982	4,40	3,76	3,76	4,00	3,79	3,79
		1983	5,16	4,41	4,41	4,52	4,31	4,31
		1984	5,42	4,63	4,63	5,42	5,11	5,11
		1985	5,35	4,57	4,57	5,51	5,20	5,20
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	2,82	2,43	2,43	2,26	2,15	2,15
		1981	3,17	2,73	2,73	2,54	2,42	2,42
		1982	3,44	2,94	2,94	3,13	2,98	2,98
		1983	4,02	3,44	3,44	3,56	3,39	3,39
		1984	4,15	3,55	3,55	4,26	4,02	4,02
		1985	4,31	3,68	3,68	4,34	4,09	4,09
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	2,48	2,14	2,14	1,94	1,85	1,85
		1981	2,87	2,47	2,47	2,19	2,09	2,09
		1982	3,09	2,64	2,64	2,56	2,44	2,44
		1983	3,63	3,10	3,10	2,91	2,77	2,77
		1984	3,71	3,17	3,17	3,49	3,29	3,29
		1985	3,84	3,28	3,28	3,55	3,35	3,35
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	2,27	1,96	1,96	1,51	1,44	1,44
		1981	2,63	2,27	2,27	1,70	1,62	1,62
		1982	2,87	2,45	2,45	2,06	1,96	1,96
		1983	3,40	2,91	2,91	2,37	2,25	2,25
		1984	3,46	2,96	2,96	2,88	2,71	2,71
		1985	3,59	3,07	3,07	2,92	2,75	2,75
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	1,89	1,63	1,63	1,61	1,53	1,53
		1981	2,25	1,94	1,94	1,40	1,33	1,33
		1982	2,47	2,11	2,11	1,68	1,60	1,60
		1983	2,93	2,50	2,50	1,93	1,84	1,84
		1984	2,95	2,52	2,52	2,35	2,22	2,22
		1985	3,08	2,64	2,64	2,39	2,25	2,25

* Leistungsreduzierung
power reduction

effacement
riduzione di potenza

GRAND-DUCHE DE LUXEMBOURG

LFR/kWh

Januar Janvier Gennaio		Luxembourg 50 % *			Luxembourg 100 % *			
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	2,99	2,85	2,85	2,10	2,00	2,00
		1981	3,35	3,19	3,19	2,36	2,25	2,25
		1982	4,18	3,98	3,98	3,01	2,87	2,87
		1983	4,74	4,56	4,52	3,42	3,26	3,26
		1984	5,67	5,35	5,35	4,08	3,85	3,85
		1985	5,78	5,45	5,45	4,12	3,89	3,89
I _b	50 000 kWh (50 kW, 1000 h)	1980	2,96	2,82	2,82	2,07	1,97	1,97
		1981	3,34	3,18	3,18	2,33	2,22	2,22
		1982	4,17	3,97	3,97	2,95	2,81	2,81
		1983	4,74	4,51	4,51	3,35	3,19	3,19
		1984	5,67	5,35	5,35	4,01	3,78	3,78
		1985	5,75	5,42	5,42	4,09	3,86	3,86
I _c	160 000 kWh (100 kW, 1600 h)	1980	2,38	2,27	2,27	1,82	1,73	1,73
		1981	2,68	2,55	2,55	2,04	1,95	1,95
		1982	3,23	3,08	3,08	2,49	2,37	2,37
		1983	3,67	3,50	2,83	2,69	2,69	2,69
		1984	4,40	4,15	4,15	3,39	3,20	3,20
		1985	4,47	4,22	4,22	3,45	3,25	3,25
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	1,98	1,89	1,89	1,62	1,54	1,54
		1981	2,23	2,13	2,13	1,83	1,74	1,74
		1982	2,65	2,52	2,52	2,17	2,07	2,07
		1983	3,01	2,87	2,87	2,47	2,35	2,35
		1984	3,62	3,40	3,40	2,96	2,79	2,79
		1985	3,67	3,46	3,46	3,01	2,84	2,84
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	1,72	1,64	1,64	1,49	1,42	1,42
		1981	1,94	1,84	1,84	1,68	1,60	1,60
		1982	2,26	2,15	2,15	1,96	1,87	1,87
		1983	2,57	2,45	2,45	2,23	2,13	2,13
		1984	3,08	2,91	2,91	2,67	2,52	2,52
		1985	3,14	2,96	2,96	2,71	2,56	2,56
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	1,51	1,44	1,44	1,51	1,44	1,44
		1981	1,70	1,62	1,62	1,70	1,62	1,62
		1982	2,06	1,96	1,96	2,06	1,96	1,96
		1983	2,37	2,25	2,25	2,37	2,25	2,25
		1984	2,88	2,71	2,71	2,88	2,71	2,71
		1985	2,92	2,75	2,75	2,92	2,75	2,75
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	1,61	1,53	1,53	1,61	1,53	1,53
		1981	1,40	1,33	1,33	1,40	1,33	1,33
		1982	1,68	1,60	1,60	1,68	1,60	1,60
		1983	1,93	1,84	1,84	1,93	1,84	1,84
		1984	2,35	2,22	2,22	2,22	2,22	2,22
		1985	2,39	2,25	2,25	2,39	2,25	2,25

* Leistungsreduzierung
Power reduction* Effacement de puissance
Riduzione di potenza

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

UNITED KINGDOM

		P/kWh						
		London			Glasgow			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	600 kWh	1980	6,467	6,467	6,467	4,812	4,812	4,812
		1981	8,753	8,753	8,753	6,420	6,420	6,420
		1982	9,687	9,687	9,687	7,132	7,132	7,132
		1983	10,437	10,437	10,437	7,808	7,808	7,808
		1984	10,140	10,140	10,140	7,808	7,808	7,808
		1985	10,310	10,310	10,310	8,218	8,218	8,218
D _b	1200 kWh	1980	4,983	4,983	4,983	3,846	3,846	3,846
		1981	6,636	6,636	6,636	5,075	5,075	5,075
		1982	7,353	7,353	7,353	5,631	5,631	5,631
		1983	7,953	7,953	7,953	6,164	6,164	6,164
		1984	7,953	7,953	7,953	6,164	6,164	6,164
		1985	8,073	8,073	8,073	6,474	6,474	6,474
D _c	3500 kWh (1)	1980	3,489	3,489	3,489	2,912	2,912	2,912
		1981	4,548	4,548	4,548	3,805	3,805	3,805
		1982	5,028	5,028	5,028	4,221	4,221	4,221
		1983	5,438	5,438	5,438	4,595	4,595	4,595
		1984	5,438	5,438	5,438	4,595	4,595	4,595
		1985	5,529	5,529	5,529	4,809	4,809	4,809
D _d	7500 kWh (2)	1980	3,225	3,225	3,225	2,723	2,723	2,723
		1981	4,193	4,193	4,193	3,529	3,529	3,529
		1982	4,624	4,624	4,624	3,912	3,912	3,912
		1983	5,015	5,015	5,015	4,259	4,259	4,259
		1984	5,015	5,015	5,015	4,259	4,259	4,259
		1985	5,108	5,108	5,108	4,451	4,451	4,451
D _e	20000 kWh (3)	1980	1,990	1,990	1,990	1,810	1,810	1,810
		1981	2,628	2,628	2,628	2,367	2,367	2,367
		1982	2,871	2,871	2,871	2,623	2,623	2,623
		1983	3,068	3,068	3,068	2,816	2,816	2,816
		1984	3,068	3,068	3,068	2,816	2,816	2,816
		1985	3,128	3,128	3,128	2,938	2,938	2,938

- (1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

- (1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

- (1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

- (1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

UNITED KINGDOM

		P/kWh						
		Birmingham			Leeds			
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWST.	Preis ohne Steuern	
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes	
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes	
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	
D _a	600 kWh	1980	5,720	5,720	5,720	5,613	5,613	5,613
		1981	7,387	7,387	7,387	5,257	5,257	5,257
		1982	8,243	8,243	8,243	8,333	8,333	8,333
		1983	9,050	9,050	9,050	9,273	9,273	9,273
		1984	9,050	9,050	9,050	9,273	9,273	9,273
		1985	9,150	9,150	9,150	9,313	9,313	9,313
D _b	1200 kWh	1980	4,470	4,470	4,470	4,427	4,427	4,427
		1981	5,803	5,803	5,803	5,723	5,723	5,723
		1982	6,477	6,477	6,477	6,517	6,517	6,517
		1983	7,110	7,110	7,110	7,157	7,157	7,157
		1984	7,110	7,110	7,110	7,157	7,157	7,157
		1985	7,210	7,210	7,210	7,257	7,257	7,257
D _c	3500 kWh (1)	1980	3,156	3,156	3,156	3,195	3,195	3,195
		1981	4,136	4,136	4,136	4,133	4,133	4,133
		1982	4,607	4,607	4,607	4,625	4,625	4,625
		1983	5,019	5,019	5,019	4,994	4,994	4,994
		1984	5,019	5,019	5,019	4,994	4,994	4,994
		1985	5,097	5,097	5,097	5,071	5,071	5,071
D _d	7500 kWh (2)	1980	.	.	.	.	.	.
		1981	.	.	.	.	.	.
		1982	3,980	3,980	3,980	.	.	.
		1983	4,320	4,320	4,320	.	.	.
		1984	4,413	4,413	4,413	.	.	.
		1985	4,493	4,493	4,493	.	.	.
D _e	20000 kWh (3)	1980	1,870	1,870	1,870	1,950	1,950	1,950
		1981	2,498	2,498	2,498	2,510	2,510	2,510
		1982	2,738	2,738	2,738	2,756	2,756	2,756
		1983	2,929	2,929	2,929	2,923	2,923	2,923
		1984	2,929	2,929	2,929	2,923	2,923	2,923
		1985	2,984	2,984	2,984	2,978	2,978	2,978

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

UNITED KINGDOM

P/kWh

Januar Janvier Gennaio	January Gennaio	London			Glasgow			
		Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse	
I _a	30 000 kWh (30 kW, 1000 h)	1980	-	-	-	-	-	-
		1981	5,220	5,220	5,220	5,102	5,102	5,102
		1982	5,756	5,756	5,756	5,581	5,581	5,581
		1983	6,318	6,318	6,318	6,051	6,051	6,051
		1984	6,214	6,214	6,214	6,051	6,051	6,051
		1985	6,315	6,315	6,315	6,312	6,312	6,312
I _b	50 000 kWh (50 kW, 1000 h)	1980	4,448	4,448	4,448	3,867	3,867	3,867
		1981	5,220	5,220	5,220	4,949	4,949	4,949
		1982	5,712	5,712	5,712	5,413	5,413	5,413
		1983	6,243	6,243	6,243	5,867	5,867	5,867
		1984	6,132	6,132	6,132	5,867	5,867	5,867
		1985	6,233	6,233	6,233	6,115	6,115	6,115
I _c	160 000 kWh (100 kW, 1600 h)	1980	3,777	3,777	3,777	3,525	3,525	3,525
		1981	4,681	4,681	4,681	4,528	4,528	4,528
		1982	5,313	5,313	5,313	5,017	5,017	5,017
		1983	5,823	5,823	5,823	5,460	5,460	5,460
		1984	5,693	5,693	5,693	5,532	5,532	5,532
		1985	5,803	5,803	5,803	5,788	5,788	5,788
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	3,178	3,178	3,178	2,800	2,800	2,800
		1981	3,891	3,891	3,891	3,688	3,688	3,688
		1982	4,326	4,326	4,326	4,029	4,029	4,029
		1983	4,678	4,678	4,678	4,363	4,363	4,363
		1984	4,439	4,439	4,439	4,435	4,435	4,435
		1985	4,544	4,544	4,544	4,640	4,640	4,640
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	2,783	2,783	2,783	2,447	2,447	2,447
		1981	3,346	3,346	3,346	3,234	3,234	3,234
		1982	3,771	3,771	3,771	3,495	3,495	3,495
		1983	4,065	4,065	4,065	3,772	3,772	3,772
		1984	3,853	3,853	3,853	3,844	3,844	3,844
		1985	3,958	3,958	3,958	4,017	4,017	4,017
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	2,783	2,783	2,783	2,399	2,399	2,399
		1981	3,346	3,346	3,346	2,987	2,987	2,987
		1982	3,764	3,764	3,764	3,217	3,217	3,217
		1983	4,056	4,056	4,056	3,461	3,461	3,461
		1984	3,844	3,844	3,844	3,532	3,532	3,532
		1985	3,949	3,949	3,949	3,692	3,692	3,692
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	.	.	.	2,076	2,076	2,076
		1981	.	.	.	2,671	2,671	2,671
		1982	.	.	.	2,841	2,841	2,841
		1983	.	.	.	3,053	3,053	3,053
		1984	.	.	.	3,124	3,124	3,124
		1985	.	.	.	3,265	3,265	3,265

UNITED KINGDOM

		P/kWh					
		Birmingham			Leeds		
Januar	January	Preis alle Steuern inbeg.	Preis ohne MWSt.	Preis ohne Steuern	Preis alle Steuern inbeg.	Preis ohne MWSt.	Preis ohne Steuern
Janvier	Gennaio	Price incl. all taxes	Price excl. VAT	Price excl. all taxes	Price incl. all taxes	Price excl. VAT	Price excl. taxes
		Prix TTC	Prix hors TVA	Prix hors taxes	Prix TTC	Prix hors TVA	Prix hors taxes
		Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse	Prezzi imp. comprese	Prezzi IVA escl.	Prezzi imp. escluse
I _a	1980	-	-	-	-	-	-
	30 000 kWh (*) (30 kW, 1000 h)						
	1981	5,253	5,253	5,253	6,557	6,557	6,557
	1982	5,855	5,855	5,855	5,249	5,249	5,249
	1983	5,461	5,461	5,461	5,640	5,640	5,640
	1984	5,461	5,461	5,461	5,566	5,566	5,566
	1985	5,566	5,566	5,566	5,671	5,671	5,671
I _b	1980	4,360	4,360	4,360	4,133	4,133	4,133
	50 000 kWh (*) (50 kW, 1000 h)						
	1981	5,303	5,303	5,303	4,975	4,975	4,975
	1982	5,854	5,854	5,854	5,818	5,818	5,818
	1983	6,355	6,355	6,355	6,350	6,350	6,350
	1984	5,345	5,345	5,345	6,312	6,312	6,312
	1985	5,448	5,448	5,448	6,422	6,422	6,422
I _c	1980	3,629	3,629	3,629	3,451	3,451	3,451
	180 000 kWh (*) (100 kW, 1800 h)						
	1981	4,434	4,434	4,434	4,196	4,196	4,196
	1982	5,108	5,108	5,108	4,924	4,924	4,924
	1983	5,627	5,627	5,627	5,319	5,319	5,319
	1984	5,476	5,476	5,476	5,247	5,247	5,247
	1985	5,586	5,586	5,586	5,357	5,357	5,357
I _d	1980	2,800	2,800	2,800	2,863	2,863	2,863
	1 250 000 kWh (500 kW, 2500 h)						
	1981	3,514	3,514	3,514	3,482	3,482	3,482
	1982	4,047	4,047	4,047	4,034	4,034	4,034
	1983	4,360	4,360	4,360	4,341	4,341	4,341
	1984	4,303	4,303	4,303	4,231	4,231	4,231
	1985	4,408	4,408	4,408	4,336	4,336	4,336
I _e	1980	2,447	2,447	2,447	2,578	2,578	2,578
	2 000 000 kWh (500 kW, 4000 h)						
	1981	3,151	3,151	3,151	3,135	3,135	3,135
	1982	3,626	3,626	3,626	3,633	3,633	3,633
	1983	3,870	3,870	3,870	3,888	3,888	3,888
	1984	3,817	3,817	3,817	3,784	3,784	3,784
	1985	3,922	3,922	3,922	3,889	3,889	3,889
I _f	1980	2,399	2,399	2,399	2,562	2,562	2,562
	10 000 000 kWh (2600 kW, 4000 h)						
	1981	3,122	3,122	3,122	3,116	3,116	3,116
	1982	3,592	3,592	3,592	3,614	3,614	3,614
	1983	3,837	3,837	3,837	3,864	3,864	3,864
	1984	3,783	3,783	3,783	3,760	3,760	3,760
	1985	3,888	3,888	3,888	3,865	3,865	3,865
I _g	1980	.	.	.	2,357	2,357	2,357
	24 000 000 kWh (4000 kW, 6000 h)						
	1981	.	.	.	2,856	2,856	2,856
	1982	3,191	3,191	3,191	3,311	3,311	3,311
	1983	3,443	3,443	3,443	3,526	3,526	3,526
	1984	3,385	3,385	3,385	3,431	3,431	3,431
	1985	3,490	3,490	3,490	3,536	3,536	3,536

* Niederspannung
Low voltage* Basse tension
Bassa tensione

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

DANMARK

øre/kWh

Januar Janvier Gennaio	January		København			Nord Sjælland		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a	600 kWh	1980	66,0	54,9	46,9	92,31	76,77	68,77
		1981	87,6	71,8	59,3	129,24	105,93	93,43
		1982	88,8	72,8	60,3	154,74	126,83	114,33
		1983	109,6	89,8	74,3	149,73	122,73	107,23
		1984	98,8	81,0	69,5	154,82	126,90	111,40
		1985	111,1	91,0	75,5	158,97	130,30	114,80
D _b	1200 kWh	1980	58,8	48,9	40,9	67,26	55,93	47,93
		1981	80,3	65,8	53,3	96,71	79,27	66,77
		1982	81,5	66,8	54,3	116,10	95,17	82,67
		1983	99,7	81,7	66,2	110,10	91,07	75,57
		1984	89,0	73,0	57,5	109,07	89,40	73,90
		1985	101,1	82,9	67,4	113,22	92,80	77,30
D _c	3500 kWh (1)	1980	49,9	41,5	33,5	50,80	42,24	34,24
		1981	69,9	57,3	44,8	75,33	61,74	49,24
		1982	70,9	58,1	45,6	90,72	74,36	61,86
		1983	88,7	72,7	57,2	85,71	70,26	54,76
		1984	78,7	64,5	49,0	79,01	64,76	49,26
		1985	90,0	73,7	58,2	83,16	68,16	52,66
D _d	7500 kWh (2)	1980	47,7	39,7	31,7	.	.	.
		1981	67,6	55,4	42,9	.	.	.
		1982	68,8	56,4	43,9	.	.	.
		1983	84,7	69,4	53,9	78,65	64,47	48,97
		1984	74,6	61,1	45,6	70,64	57,90	42,40
		1985	85,9	70,4	54,9	74,79	61,30	45,80
D _e	20000 kWh (3)	1980	38,0	31,6	23,6	43,71	36,35	28,35
		1981	56,0	45,9	33,4	66,12	54,20	41,70
		1982	57,1	46,8	34,3	79,79	65,40	52,90
		1983	69,7	57,1	41,6	74,78	61,30	45,80
		1984	60,4	49,5	34,0	66,06	54,15	38,65
		1985	70,9	58,1	42,6	61,71	50,58	35,08

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

DANMARK

øre/kWh

	Januar Janvier	January Gennaio	København			Nord Sjælland		
			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWST. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
I _a 30 000 kWh (30 kW, 1000 h)		1980	51,8	43,1	35,1	43,21	35,93	27,93
		1981	73,2	60,0	47,5	65,47	53,67	41,17
		1982	74,5	61,0	48,5	79,02	64,77	52,27
		1983	90,1	73,9	58,4	74,01	60,67	45,17
		1984	79,4	65,1	49,6	65,15	53,40	37,90
		1985	91,5	75,0	59,5	69,30	56,80	41,30
I _b 50 000 kWh (50 kW, 1000 h)		1980	51,7	43,0	35,0	42,81	35,60	27,60
		1981	73,1	59,9	47,4	64,95	53,24	40,74
		1982	74,4	60,9	48,4	78,40	64,26	51,76
		1983	89,9	73,7	58,2	73,39	60,16	44,66
		1984	79,2	64,9	49,4	64,42	52,80	37,30
		1985	91,4	74,9	59,4	68,56	56,20	40,70
I _c 180 000 kWh (100 kW, 1800 h)		1980	51,7	43,0	35,0	42,40	35,26	27,26
		1981	73,1	59,9	47,4	64,42	52,80	40,30
		1982	74,3	60,9	48,4	77,76	63,74	51,24
		1983	89,9	73,7	58,2	72,76	59,64	44,14
		1984	79,2	64,9	49,4	63,66	52,18	36,68
		1985	91,4	74,9	59,4	67,81	55,58	40,08
I _d 1 250 000 kWh (500 kW, 2500 h)		1980	51,6	42,9	34,9	40,57	33,74	25,74
		1981	72,8	59,7	47,2	61,51	50,42	37,92
		1982	74,1	60,7	48,2	72,05	59,06	46,56
		1983	89,5	73,3	57,8	69,61	57,06	41,56
		1984	79,0	64,8	49,3	63,01	51,65	36,15
		1985	90,9	74,5	59,0	65,12	53,38	37,88
I _e 2 000 000 kWh (500 kW, 4000 h)		1980	48,6	40,4	32,4	37,04	30,80	22,80
		1981	68,1	55,8	43,3	56,15	46,02	33,52
		1982	69,3	56,8	44,3	66,96	54,89	42,39
		1983	83,7	68,6	53,1	64,52	52,89	37,39
		1984	72,9	59,8	44,3	55,28	45,31	29,81
		1985	85,1	69,7	54,2	57,93	47,48	31,98
I _f 10 000 000 kWh (2500 kW, 4000 h)		1980	43,7	36,3	28,3	36,63	30,46	22,46
		1981	62,7	51,4	38,9	55,72	45,67	33,17
		1982	64,1	52,5	40,0	65,71	53,86	41,36
		1983	78,5	64,3	48,8	64,12	52,56	37,06
		1984	68,2	55,9	40,4	54,55	44,71	29,21
		1985	79,8	65,4	49,9	57,07	46,78	31,28
I _g 24 000 000 kWh (4000 kW, 6000 h)		1980	42,2	35,1	27,1	.	.	.
		1981	61,1	50,1	37,6	.	.	.
		1982	62,5	51,2	38,7	.	.	.
		1983	76,2	62,4	46,9	.	.	.
		1984	65,9	54,0	38,5	.	.	.
		1985	77,5	63,5	48,0	.	.	.

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE
ELECTRICITY PRICES FOR HOUSEHOLDS

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES
PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

ELLAS

DRA/kWh

Januar Janvier	January Gennaio	Athinai			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse	Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. taxes Prix hors taxes Prezzi imp. escluse
D _a 600 kWh	1980		4,82	4,46	4,46					
	1981		5,70	5,28	5,28					
	1982		6,17	5,61	5,61					
	1983		6,95	6,31	6,31					
	1984		7,02	6,31	6,31					
	1985		7,87	7,07	7,07					
D _b 1200 kWh	1980		4,82	4,46	4,46					
	1981		5,70	5,28	5,28					
	1982		6,17	5,61	5,61					
	1983		6,95	6,31	6,31					
	1984		8,10	7,28	7,28					
	1985		9,07	8,15	8,15					
D _c 3500 kWh (1)	1980		4,13	3,82	3,82					
	1981		4,76	4,41	4,41					
	1982		5,15	4,68	4,68					
	1983		5,79	5,26	5,26					
	1984		6,96	6,25	6,25					
	1985		7,88	7,08	7,08					
D _d 7500 kWh (2)	1980		4,32	4,00	4,00					
	1981		5,01	4,64	4,64					
	1982		5,41	4,92	4,92					
	1983		6,09	5,54	5,54					
	1984		7,41	6,66	6,66					
	1985		8,36	7,51	7,51					
D _e 20000 kWh (3)	1980		3,14	2,91	2,91					
	1981		3,51	3,25	3,25					
	1982		3,80	3,45	3,45					
	1983		4,27	3,88	3,88					
	1984		5,42	4,87	4,87					
	1985		6,20	5,57	5,57					

(1) darunter 1 300 kWh Nachtverbrauch
(2) darunter 2 500 kWh Nachtverbrauch
(3) darunter 15 000 kWh Nachtverbrauch

(1) of which 1 300 kWh at night
(2) of which 2 500 kWh at night
(3) of which 15 000 kWh at night

(1) dont 1 300 kWh de nuit
(2) dont 2 500 kWh de nuit
(3) dont 15 000 kWh de nuit

(1) di cui 1 300 kWh consumo notturno
(2) di cui 2 500 kWh consumo notturno
(3) di cui 15 000 kWh consumo notturno

E L L A S

DRA/kWh

Januar Janvier	January Gennaio		Athinai			Preis alle Steuern inbeg. Price incl. all taxes Prix TTC Prezzi imp. comprese	Preis ohne MWSt. Price excl. VAT Prix hors TVA Prezzi IVA escl.	Preis ohne Steuern Price excl. all taxes Prix hors taxes Prezzi imp. escluse
I _a	30 000 kWh (30 kW, 1000 h)	1980	5,01	5,01	5,01			
		1981	5,32	5,32	5,32			
		1982	8,41	8,41	8,41			
		1983	9,46	9,46	9,46			
		1984	7,91	7,91	7,91			
		1985	.	.	.			
I _b	50 000 kWh (50 kW, 1000 h)	1980	4,71	4,71	4,71			
		1981	4,97	4,97	4,97			
		1982	8,31	8,31	8,31			
		1983	9,34	9,34	9,34			
		1984	7,81	7,81	7,81			
		1985	.	.	.			
I _c	160 000 kWh (100 kW, 1600 h)	1980	4,03	4,03	4,03			
		1981	4,14	4,14	4,14			
		1982	5,88	5,88	5,88			
		1983	6,61	6,61	6,61			
		1984	8,64	8,64	8,64			
		1985	10,02	10,02	10,02			
I _d	1 250 000 kWh (500 kW, 2500 h)	1980	3,45	3,45	3,45			
		1981	3,48	3,48	3,48			
		1982	4,96	4,96	4,96			
		1983	5,59	5,59	5,59			
		1984	7,20	7,20	7,20			
		1985	8,32	8,32	8,32			
I _e	2 000 000 kWh (500 kW, 4000 h)	1980	3,09	3,09	3,09			
		1981	3,07	3,07	3,07			
		1982	4,40	4,40	4,40			
		1983	4,95	4,95	4,95			
		1984	6,69	6,69	6,69			
		1985	7,75	7,75	7,75			
I _f	10 000 000 kWh (2500 kW, 4000 h)	1980	2,95	2,95	2,95			
		1981	2,92	2,92	2,92			
		1982	4,20	4,20	4,20			
		1983	4,73	4,73	4,73			
		1984	6,69	6,69	6,69			
		1985	7,75	7,75	7,75			
I _g	24 000 000 kWh (4000 kW, 6000 h)	1980	2,94	2,94	2,94			
		1981	2,88	2,88	2,88			
		1982	4,14	4,14	4,14			
		1983	4,66	4,66	4,66			
		1984	5,70	5,70	5,70			
		1985	6,57	6,57	6,57			

**TABELLE FÜR DIE UMRECHNUNG
DES KAUFKRAFTSTANDARDS (KKS)**
**TABLE DE CONVERSION DU
STANDARD DE POUVOIR D'ACHAT (SPA)**
**CONVERSION TABLE FOR THE
PURCHASING POWER STANDARD (PPS)**
**TABELLA DI CONVERSIONE DELLO
STANDARD DI POTERE D'ACQUISTO (SPA)**

1 KKS =

1 PPS =

1 SPA =

	BR Deutschland DM	France FF	Italia LIT	Niederland HFL	België Belgique BFR	Luxembourg LFR	United Kingdom UKL	Irland IRL	Danmark DKR	Ellas DRA
1980 (1)	2,64	5,85	847	2,82	40,8	38,6	0,543	0,514	8,28	39,5
1981	2,49	5,93	906	2,69	38,9	38,2	0,548	0,545	8,24	42,6
1982	2,37	6,06	970	2,59	37,8	37,7	0,533	0,570	8,33	48,2
1983	2,27	6,17	1036	2,45	37,2	37,7	0,520	0,585	8,36	53,6
1984/85 (2)	2,22	6,29	1086	2,38	37,7	38,4	0,519	0,602	8,37	60,0

(1) ausgewähltes Basisjahr/ chosen reference year
année de base choisie / anno di referenza scelto

(2) vorläufig/provisional
provisoire/provisorio

**TABELLE FÜR DIE UMRECHNUNG
DER EUROPÄISCHEN WÄHRUNGSEINHEIT (ECU)**
**TABLE DE CONVERSION DE
L'UNITE MONETAIRE EUROPEENNE (ECU)**
**CONVERSION TABLE FOR THE
EUROPEAN CURRENCY UNIT (ECU)**
**TABELLA DI CONVERSIONE
DELL'UNITA MONETARIA EUROPEA (ECU)**

1 ECU =

1 ECU =

Januar/January Janvier/Gennaio	BR Deutschland DM	France FF	Italia LIT	Niederland HFL	België Belgique BFR	Luxembourg LFR	United Kingdom UKL	Irland IRL	Danmark DKR	Ellas DRA
1980	2,4885	5,8302	1161,3	2,7474	40,4260	40,4260	0,6373	0,6734	7,7713	55,5901
1981	2,5806	5,9657	1225,8	2,8047	41,4920	41,4920	0,5346	0,6919	7,9395	60,8793
1982	2,4442	6,2102	1308,9	2,6790	41,6068	41,6068	0,5653	0,6922	7,9886	62,6924
1983	2,2967	6,5095	1320,9	2,5287	45,0461	45,0461	0,6103	0,6909	8,0884	77,5595
1984	2,2580	6,9034	1371,2	2,5379	46,0675	46,0675	0,5706	0,7288	8,1769	82,3314
1985	2,2242	6,8083	1367,8	2,5126	44,5188	44,5188	0,6220	0,7140	7,9483	90,6900

**PREISINDICES DES BIP
GDP PRICE INDICES**
**INDICES DE PRIX DU PIB
INDICI DEI PREZZI DEL PIL**

1980 = 100

	BR Deutschland	France	Italia	Niederland	België Belgique	Luxembourg	United Kingdom	Irland	Danmark	Ellas
1981	104,1	112,1	118,3	105,5	105,3	107,9	111,7	117,1	110,1	119,3
1982	108,9	126,1	139,5	111,9	112,7	117,1	119,6	135,0	122,5	148,6
1983	112,4	138,4	160,5	114,0	119,4	127,0	125,7	149,3	132,5	176,0
1984 (1)	114,6	148,8	176,7	116,9	126,0	136,1	130,7	160,6	138,5	210,5
1985 (1)	117,1	157,1	190,7	118,7	132,3	142,8	137,2	169,8	144,2	247,6

(1) vorläufig / provisional / provisoire / provvisorio

Preisbereinigt KKS/100 kWh
deflated PPS/100 kWh

SPA déflaté/100 kWh
SPA deflazionato/100 kWh

EUR 10

Januar	January	DÜSSELDORF	PARIS	MILANO	ROTTERDAM	BRUXELLES	LUXEMBOURG	LONDON	DUBLIN	KOBENHAVN	ATHINAI	
Janvier	Gennaio											
D_a	1980	13,25	13,48	5,95	11,30	15,59	11,55	11,91	10,18	7,97	12,20	
	1981	14,03	12,53	6,14	11,62	16,06	11,55	14,43	11,88	9,61	12,10	
	600 kWh	1982	14,00	12,71	6,56	12,42	16,46	12,99	14,92	12,79	8,75	10,51
	1983	14,34	12,62	7,21	12,74	17,90	13,26	15,29	12,18	9,99	9,88	
	1984	14,97	12,43	6,84	12,38	17,95	14,26	14,29	12,48	8,62	8,44	
	1985	14,65	11,34	6,98	12,44	16,41	13,84	13,84	12,66	9,31	8,05	
D_b	1980	9,83	9,87	6,64	9,33	12,16	9,15	9,18	8,43	7,10	12,20	
	1981	10,74	9,24	7,06	9,76	12,76	9,17	10,94	10,09	8,81	12,10	
	1 200 kWh	1982	10,79	9,37	7,38	10,62	13,16	9,62	11,32	10,99	8,04	10,51
	1983	10,95	9,68	8,37	10,87	14,31	9,87	11,65	10,46	9,09	9,88	
	1984	11,36	9,65	8,65	10,49	14,20	10,34	11,21	10,69	7,76	9,74	
	1985	11,15	9,56	8,68	10,58	14,15	10,66	10,84	10,83	8,47	9,27	
D_c	1980	6,94	7,96	11,03	7,40	8,60	6,45	6,43	6,28	6,03	10,46	
	1981	7,96	7,46	11,39	8,00	9,22	6,43	7,50	7,79	7,67	10,10	
	3 500 kWh (1)	1982	8,05	7,67	11,13	9,00	9,59	6,95	7,74	8,52	6,99	8,78
	1983	8,23	8,00	12,68	9,20	10,47	6,94	7,97	7,75	8,08	8,23	
	1984	8,51	8,41	15,47	8,81	10,25	7,46	7,66	7,84	6,86	8,37	
	1985	8,33	8,41	15,27	8,93	10,24	7,24	7,42	7,92	7,54	8,06	
D_d	1980	.	7,31	10,15	6,95	7,94	5,08	5,94	6,48	5,76	10,94	
	1981	.	6,87	10,51	7,54	8,59	5,14	6,91	7,64	7,42	10,63	
	7 500 kWh (2)	1982	.	7,09	10,37	8,52	8,96	6,37	7,12	8,34	6,78	9,22
	1983	.	7,40	11,11	8,72	9,77	6,75	7,35	7,60	7,72	8,66	
	1984	.	7,83	14,46	8,32	9,53	7,31	7,07	7,69	6,51	8,91	
	1985	.	7,84	14,32	8,44	9,45	7,09	6,86	7,76	7,19	8,55	
D_e	1980	3,83	5,81	/	5,54	5,54	3,76	3,66	4,80	4,59	7,95	
	1981	4,36	5,45	/	6,17	6,14	3,79	4,33	6,15	6,14	7,45	
	20 000 kWh(3)	1982	4,56	5,66	/	7,22	6,52	4,47	4,42	6,70	5,63	6,47
	1983	4,49	5,91	/	7,42	7,12	4,55	4,49	5,67	6,35	6,07	
	1984	4,65	6,25	/	7,02	6,83	4,93	4,32	5,63	5,27	6,52	
	1985	4,55	6,27	/	7,16	6,60	4,79	4,20	5,67	5,94	6,34	

(1) darunter 1300 kWh Nachtverbrauch
(2) darunter 2500 kWh Nachtverbrauch
(3) darunter 15000 kWh Nachtverbrauch

(1) of which 1300 kWh at night
(2) of which 2500 kWh at night
(3) of which 15000 kWh at night

(1) dont 1300 kWh de nuit
(2) dont 2500 kWh de nuit
(3) dont 15000 kWh de nuit

(1) di cui 1300 kWh consumo notturno
(2) di cui 2500 kWh consumo notturno
(3) di cui 15000 kWh consumo notturno

ELEKTRIZITÄTSPREISE FÜR HAUSHALTE

PRIX DE L'ÉLECTRICITÉ POUR USAGES DOMESTIQUES

ELECTRICITY PRICES FOR HOUSEHOLDS

PREZZI DELL'ENERGIA ELETTRICA PER USI DOMESTICI

ECU/100 kWh

EUR 10

Januar	January	DÜSSELDORF	PARIS	MILANO	ROTTERDAM	BRUXELLES	LUXEMBOURG	LONDON	DUBLIN	KOBENHAVN	ATHINAI	
Janvier	Gennaio											
D _a	1980	14,06	13,53	4,34	11,60	15,73	11,58	10,15	7,77	8,49	8,67	
	1981	14,94	13,77	5,02	12,33	16,63	12,17	16,37	10,34	11,03	9,36	
	600 kWh	1982	16,47	15,10	5,93	14,62	18,19	14,81	17,14	12,82	11,12	9,84
	1983	18,52	15,70	7,42	16,19	19,36	15,16	17,10	13,53	13,55	8,96	
	1984	20,06	15,68	7,47	16,08	20,04	17,24	17,77	14,13	12,10	8,53	
	1985	20,36	15,31	8,24	16,58	19,90	17,14	16,58	15,48	13,98	8,68	
D _b	1980	10,42	9,90	4,84	9,58	12,27	9,15	7,82	6,43	7,57	8,67	
	1981	11,44	10,15	5,77	10,35	13,21	9,66	12,41	8,78	10,11	9,36	
	1 200 kWh	1982	12,70	11,13	6,66	12,51	14,54	10,98	13,01	11,02	10,20	9,84
	1983	14,15	12,04	8,61	13,58	15,47	11,28	13,03	11,62	12,33	8,96	
	1984	15,23	12,17	9,44	13,62	15,85	12,89	13,94	12,11	10,88	9,84	
	1985	15,50	12,91	10,26	14,09	17,16	12,80	12,98	13,24	12,72	10,00	
D _c	1980	7,36	7,99	8,04	7,60	8,68	6,46	5,47	4,79	6,42	7,43	
	1981	8,48	8,20	9,31	8,48	9,54	6,80	8,51	6,77	8,80	7,82	
	3 500 kWh (1)	1982	9,47	9,11	10,05	10,60	10,60	7,93	8,89	8,54	8,88	8,21
	1983	10,63	9,95	13,05	11,70	11,32	7,93	8,91	8,61	10,97	7,47	
	1984	11,41	10,60	16,89	11,44	11,44	9,01	9,53	8,88	9,62	8,45	
	1985	11,58	11,35	18,03	11,89	12,42	8,96	8,89	9,68	11,32	9,57	
D _d	1980	.	7,34	7,40	7,14	8,01	4,85	5,06	4,95	6,14	7,77	
	1981	.	7,55	8,59	7,99	8,89	5,16	7,84	6,65	8,51	8,23	
	7 500 kWh (2)	1982	.	8,42	9,36	10,04	9,90	6,92	8,18	8,36	8,61	8,63
	1983	.	9,21	11,44	11,08	10,57	7,35	8,22	8,44	10,47	7,85	
	1984	.	9,87	15,78	10,80	10,64	8,34	8,79	8,71	10,39	9,00	
	1985	.	10,39	16,91	11,24	11,46	8,78	8,21	9,48	10,81	9,22	
D _e	1980	4,06	5,83	/	5,68	5,59	3,76	3,12	3,66	4,89	5,65	
	1981	4,64	5,99	/	6,55	6,36	4,00	4,92	5,35	7,05	5,77	
	20 000 kWh(3)	1982	5,36	6,72	/	8,50	7,21	5,10	5,08	6,72	7,15	6,06
	1983	5,80	7,36	/	9,44	7,70	5,19	5,03	6,30	8,62	5,51	
	1984	6,23	7,88	/	9,12	7,62	5,97	5,38	6,38	7,39	6,58	
	1985	6,32	8,46	/	9,54	8,00	5,93	5,03	6,93	8,92	6,84	

(1) darunter 1300 kWh Nachtverbrauch
 (2) darunter 2500 kWh Nachtverbrauch
 (3) darunter 15000 kWh Nachtverbrauch

(1) of which 1300 kWh at night
 (2) of which 2500 kWh at night
 (3) of which 15000 kWh at night

(1) dont 1300 kWh de nuit
 (2) dont 2500 kWh de nuit
 (3) dont 15000 kWh de nuit

(1) di cui 1300 kWh consumo notturno
 (2) di cui 2500 kWh consumo notturno
 (3) di cui 15000 kWh consumo notturno

Preisbereinigt KKS/100 kWh
Deflated PPS/100 kWhSPA déflaté/100 kWh
SPA deflazionato/100 kWh

EUR 10

Januar	January	DÜSSELDORF	PARIS	MILANO	ROTTERDAM	BRUXELLES	LUXEMBOURG	LONDON	DUBLIN	KOBENHAVN	ATHINA	
Janvier	Gennaio											
I _a	1980	.	6,69	8,67	9,30	8,46	7,38	.	10,35	5,21	12,68	
	1981	.	6,29	9,25	9,11	8,80	7,66	8,61	13,02	6,58	11,29	
	30 000 kWh	1982	.	6,42	9,23	9,76	8,74	8,81	8,86	13,99	6,01	14,33
	(30 kW, 1000 h)	1983	.	6,76	10,82	9,28	9,67	9,22	9,26	12,58	6,74	13,45
		1984	.	8,51	12,32	9,22	9,67	10,18	8,76	12,27	5,68	9,51
		1985	.	8,49	14,35	9,34	9,34	9,89	8,48	12,18	6,28	.
I _b	1980	.	6,69	9,21	9,07	8,46	7,31	8,19	10,35	5,19	11,92	
	1981	.	6,29	9,66	9,11	8,80	7,64	8,61	13,02	6,57	10,55	
	50 000 kWh	1982	.	6,42	9,58	9,76	8,74	8,80	13,99	6,00	14,16	
	(50 kW, 1000 h)	1983	.	6,76	10,82	9,28	9,67	9,20	9,15	12,58	6,72	13,28
		1984	.	7,81	10,95	9,22	10,69	10,18	8,64	12,27	5,66	9,39
		1985	.	7,71	12,77	8,97	9,30	9,83	8,37	12,18	6,27	.
I _c	1980	7,54	5,73	8,15	7,64	7,87	5,88	6,96	8,24	5,19	10,20	
	1981	8,07	5,41	8,65	7,83	8,24	6,12	7,72	10,49	6,57	8,79	
	160 000 kWh	1982	8,11	5,59	8,37	8,95	8,18	6,81	8,18	11,44	6,00	10,02
	(100 kW, 1600 h)	1983	7,80	6,10	9,52	8,46	9,05	7,14	8,53	10,32	6,72	9,40
		1984	8,10	6,26	9,56	7,46	9,01	7,90	8,02	10,14	5,66	10,39
		1985	7,93	6,22	11,14	7,58	8,47	7,66	7,79	10,07	6,27	10,25
I _d	1980	5,95	4,77	6,75	5,93	5,96	4,90	5,85	6,42	5,18	8,73	
	1981	6,37	4,52	7,19	6,49	6,35	5,11	6,42	8,20	6,55	7,38	
	1 250 000 kWh	1982	6,41	4,65	7,39	7,42	6,39	5,58	6,66	9,04	5,98	8,45
	(500 kW, 2500 h)	1983	6,16	4,85	8,47	6,84	7,06	5,85	6,85	8,19	6,68	7,95
		1984	6,40	5,07	8,43	6,42	6,69	6,47	6,25	8,10	5,65	8,66
		1985	6,26	5,12	9,53	7,05	6,82	6,28	6,10	7,94	6,24	8,51
I _e	1980	5,22	4,12	6,31	5,21	5,25	4,25	5,13	5,55	4,88	7,82	
	1981	5,65	3,92	6,75	5,76	5,75	4,42	5,52	7,19	6,12	6,51	
	2 000 000 kWh	1982	5,40	4,00	7,01	6,71	5,74	4,76	5,81	7,98	5,60	7,50
	(500 kW, 4000 h)	1983	5,50	4,11	8,05	6,14	6,36	5,00	5,96	7,19	6,25	7,04
		1984	5,66	4,24	7,98	5,89	6,17	5,54	5,43	7,15	5,21	8,05
		1985	5,54	4,20	8,31	6,53	6,08	5,37	5,31	6,99	5,84	7,92
I _f	1980	4,81	4,06	6,02	5,15	4,80	3,73	5,13	5,54	4,38	7,47	
	1981	5,22	3,87	6,44	5,42	5,28	3,89	5,52	7,04	5,64	6,20	
	10 000 000 kWh	1982	5,27	3,94	6,74	6,53	5,33	4,34	5,80	7,82	5,18	7,16
	(2500 kW, 4000 h)	1983	5,07	4,04	7,17	6,04	5,97	4,59	5,94	7,04	5,86	6,73
		1984	5,22	4,19	7,07	5,86	5,76	5,16	5,42	7,01	4,87	8,05
		1985	5,11	4,20	7,73	6,05	5,69	4,99	5,30	6,80	5,48	7,92
I _g	1980	.	3,48	5,41	4,71	4,00	3,96	.	5,04	4,24	7,44	
	1981	.	3,33	5,79	4,99	4,52	3,19	.	6,48	5,50	6,11	
	24 000 000 kWh	1982	.	3,37	6,28	6,08	4,59	3,54	.	7,22	5,05	7,05
	(4000 kW, 6000h)	1983	.	3,42	6,66	5,19	5,13	3,75	.	6,52	5,69	6,63
		1984	.	3,54	6,53	4,99	4,90	4,23	.	6,41	4,71	6,86
		1985	.	3,49	5,72	5,14	4,89	4,08	.	6,14	5,32	6,72

(1) Ohne Mehrwertsteuer / Excluding VAT / Hors TVA / Senza IVA

ECU/100 kWh

EUR 10

Januar	January	DÜSSELDORF	PARIS	MILANO	ROTTERDAM	BRUXELLES	LUXEMBOURG	LONDON	DUBLIN	KOBENHAVN	ATHINAI	
Janvier	Gennaio											
I _a	1980		6,71	6,33	9,55	8,53	7,05	.	7,90	5,55	9,01	
	1981		6,91	7,56	9,66	9,11	7,69	9,76	11,32	7,56	8,74	
	30 000 kWh		1982	7,62	8,33	11,49	9,66	9,57	10,18	14,03	7,64	13,41
	(30 kW, 1000 h)		1983	8,41	11,13	11,80	10,46	10,03	10,35	14,75	9,14	12,20
			1984	10,73	13,45	11,97	10,79	11,61	10,89	13,90	7,96	9,61
			1985	11,47	16,95	12,44	11,32	12,24	10,15	14,89	9,44	.
I _b	1980		6,71	6,72	9,31	8,53	6,98	6,98	7,90	5,53	8,47	
	1981		6,91	7,90	9,66	9,11	7,66	9,76	11,32	7,54	8,16	
	50 000 kWh		1982	7,62	8,64	11,49	9,66	9,54	10,10	14,03	7,75	13,26
	(50 kW, 1000 h)		1983	8,41	11,13	11,80	10,46	10,01	10,23	14,75	9,11	12,04
			1984	9,85	11,95	11,97	10,66	11,01	10,75	13,90	7,94	9,49
			1985	10,41	15,08	11,95	11,28	12,17	10,02	14,89	9,42	.
I _c	1980	8,00	5,75	5,95	7,84	7,94	5,62	5,93	6,29	5,53	7,25	
	1981	8,59	5,94	7,07	8,31	8,53	6,15	8,76	9,13	7,54	6,80	
	160 000 kWh	1982	9,55	6,64	7,55	10,54	9,04	7,40	9,40	11,47	7,62	9,38
	(100 kW, 1600 h)	1983	10,08	7,59	9,80	10,76	9,79	7,77	9,54	11,95	9,11	8,52
		1984	10,85	7,90	10,43	9,69	10,05	9,01	9,98	11,49	7,94	10,49
		1985	11,02	8,40	13,16	10,09	10,27	9,48	9,33	12,31	9,42	11,05
I _d	1980	6,32	4,78	4,93	6,09	6,01	4,68	4,99	4,90	5,52	6,21	
	1981	6,79	4,97	5,87	6,88	6,58	5,13	7,28	7,14	7,52	5,72	
	1 250 000 kWh	1982	7,54	5,53	6,67	8,73	7,07	6,06	7,65	9,06	7,60	7,91
	(500 kW, 2500 h)	1983	7,96	6,03	8,72	8,70	7,64	6,37	7,67	9,32	9,06	7,21
		1984	8,57	6,39	9,20	8,33	7,71	7,38	7,78	9,18	7,92	8,75
		1985	8,70	6,92	11,25	9,40	8,27	7,77	7,31	9,71	9,37	9,17
I _e	1980	5,53	4,13	4,60	5,35	5,29	4,06	4,37	4,24	5,20	5,56	
	1981	6,02	4,31	5,52	6,11	5,95	4,43	6,26	6,25	7,03	5,04	
	2 000 000 kWh	1982	6,72	4,75	6,33	7,90	6,35	5,17	6,67	8,00	7,11	7,02
	(500 kW, 4000 h)	1983	7,10	5,11	8,29	7,81	6,88	5,44	6,66	8,13	8,48	6,38
		1984	7,59	5,35	8,71	7,65	6,88	6,32	6,75	8,10	7,31	8,13
		1985	7,70	5,67	9,81	8,70	7,37	6,65	6,36	8,54	8,77	8,55
I _f	1980	5,11	4,07	4,39	5,28	4,85	3,56	4,37	4,23	4,67	5,31	
	1981	5,56	4,25	5,26	5,75	5,47	3,90	6,26	6,13	6,47	4,80	
	10 000 000 kWh	1982	6,20	4,67	6,08	7,69	5,89	4,71	6,66	7,84	6,57	6,70
	(2500 kW, 4000 h)	1982	6,55	5,02	7,37	7,68	6,46	4,99	6,65	7,96	7,95	6,10
		1984	7,00	5,29	7,72	7,61	6,43	5,88	6,74	7,94	6,84	8,13
		1985	7,10	5,67	9,13	8,06	6,90	6,18	6,35	8,31	8,23	8,55
I _g	1980	.	3,49	3,95	4,83	4,03	3,78	.	3,85	4,52	5,29	
	20 000 000 kWh	1981	.	3,66	4,73	5,29	4,68	3,21	.	5,64	6,31	4,73
	(4000 kW, 6000h)	1982	.	4,00	5,67	7,16	5,07	3,85	.	7,24	6,41	6,60
		1983	.	4,26	6,85	6,59	5,55	4,08	.	7,24	7,71	6,01
		1984	.	4,47	7,12	6,48	5,47	4,82	.	7,26	6,60	6,92
		1985	.	4,71	6,75	6,85	5,93	5,05	.	7,51	7,99	7,24

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