GAS PRICES
1978-1980

INTERNAL DOCUMENT

1980

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ISTITUTO STATISTICO DELLE COMUNITÀ EUROPEE

BUREAU VOOR DE STATISTIEK DER EUROPESE GEMEENSCHAPPEN

Luxembourg-Kirchberg, Boite postale 1907 — Tél. 43011, Télex: Comeur Lu 3423
1049 Bruxelles, Bâtiment Berlaymont, Rue de la Loi 200 (Bureau de liaison) — Tél. 7358040

GAS PRICES
1978-1980

Up to date april 1980

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

For all information concerning this publication, contact:
F. DESGARDES — Tel. Luxembourg 43011, ext. 3102

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I - INTRODUCTION

The present publication is an updating of gas prices in the Community up to and including 1980. It follows on as quickly as possible from previous publications, which are still available :

GAS PRICES 1976-1978	EUROSTAT 1979	cat. = CA 28-79-326
GAS PRICES 1970-1976	EUROSTAT 1977	cat. = CA 22-77-120

In order to make things easier for users, these volumes from a published series with the same layout and the same system of distribution. They also have similar definitions,methods and coverage and thus form a homogeneous set. Together, these three publications monitor trends in gas prices and tariffs in the Community countries from 1970 to 1980, and are available in four languages, namely English, French, German and Italian.

In order to avoid repetition, only the general outlines of the survey are set out below in the section entitled "Conditions and methods". If necessary, reference can always be made to the previous publications.

However, a number of changes have been made to the presentation of the text of this updated version. As there are seldom any changes in the organization of the gas industry and the relevant regulations in each country, the corresponding two sections have been replaced by a section entitled "Situation in the gas industry", which outlines recent developments which may affect gas prices.

As in the past, this study considers three aspects :

- firstly, description of the tariff systems currently in force on which the prices are based;
- secondly, taxes on gas sales;
- finally, the recording and analysis of price levels, with comments on recent trends.

The whole thing is rounded off by an international comparison, accompanied by a number of conclusions.

The survey on which this study is based was carried out directly by the SOEC and could not have been completed without the close cooperation of the gas companies, to whom we should like to express particular thanks.

II - CONDITIONS AND METHODS

1. Scope and locations

As in the previous study, the survey covers the nine Member States of the Community and the prices were recorded in 27 towns or conurbations:

- FR Germany: Hamburg, Hannover, Düsseldorf, Frankfurt, Stuttgart, München;
- France : Lille, Paris (1), Strasbourg, Marseille, Lyon, Toulouse;
- Italy : Milan, Turin, Genoa, Rome, Naples;
- Netherlands: Rotterdam;
- Belgium : Antwerp, Brussels, Liège;
- Luxembourg: Luxembourg city;
- United Kingdom: London (2), Leeds, Birmingham;
- Ireland : Dublin;
- Denmark : Copenhagen.

Three years are covered by this study:

1978 - 1979 - 1980.

The prices are recorded and calculated in accordance with the tariffs, conditions and rules in force at the beginning of each year. 1978 is included as a link with the previous study, and also enables any necessary corrections to be made to prices.

2. Units of measurement of energy

Following international resolutions adopted by the General Conference on Weights and Measures, which resulted in the "International System of Units of Measurement" (SI), a number of Council Directives (71/354, 76/770 and 80/181) laid down the rules to be followed with regard specifically to units of measurement of energy.

The use of the calorie and its derivatives are now prohibited. Only two units of energy may be used, namely the Joule and the kilowatthour. These two units are derived from the same basic definition, since 1 Joule equals 1 watt/second. However, a concession was granted to the United Kingdom and Ireland, which may continue to use the therm for a transitional period.

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(1) Paris region
(2) Cardiff = Glasgow = London

Four units of measurement are therefore still found in the current gas tariffs, i.e.:

the Joule (Belgium)
the kilowatthour (FR Germany, France)
the m^3 (Italy, Netherlands, Luxembourg, Denmark)
the therm (United Kingdom, Ireland)

(the m^3 is in turn defined by an energy content expressed in Joules).

With a view to standardization and simplification, the Joule (or its decimal multiples) was chosen by the SOEC as the common unit of measurement.

The decimal multiples of the Joule are as follows :

Kilojoule (kJ) = 1 000 Joules
Megajoule (MJ) = 1 000 000 Joules
Gigajoule (GJ) = 1 000 000 000 Joules
Terajoule (TJ) = 1 000 000 000 000 Joules.

In the present study, gas prices are expressed in terms of monetary units per Gigajoule.

The table below can be used for conversion from one unit of measurement to another:

	GJ	GWh	Gcal	th
1 Gigajoule :	1	0.0002777	0.2390	9.4781
1 Gigawatt hour:	3 600	1	860	34 120
1 Gigacalorie :	4.186	0.001163	1	39.683
1 therm :	0.1055	0.0000293	0.0252	1

In addition, as a guide, one Gigajoule of gas may be said to be approximately equivalent to 35 kg of saleable coal and 25 kg of light fuel oil or heating oil.

Finally, the unit of energy used in this study is measured on the basis of the gross calorific value (GCV), as is the practice in the gas industry and gas tariffs. This method of measurement departs from that used in energy statistics and for other sources of energy, where the net calorific value (NCV), which is closer to the energy that can actually be used be the consumer, is always used. For gas, the difference between gross and net calorific value is around 10%. The gas prices shown in this study in GJ (GCV) can thus be converted into GJ (NCV) by applying a factor of 1.1.

3. Standard consumers

The survey is based on the system of standard consumers, i.e. the prices are recorded for certain levels of gas consumption and under certain conditions of supply, chosen as being representative of the population of gas 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.

For domestic uses, the standard consumers are determined by the annual volume of consumption. Five standard consumers, coded D_1 to D_4 and defined as follows, have been taken:

	ANNUAL CONSUMPTION	EQUIPMENT
D_1	8.37 GJ (i.e. 2 326 kWh or 2 Gcal)	cooking and water heating
D_2(1)	16.74 GJ (i.e. 4 652 kWh or 4 Gcal)	cooking and water heating
D_3	83.7 GJ (i.e. 23 260 kWh or 20 Gcal)	cooking, water heating and central heating
D_{3b}	125.6 GJ (i.e. 34 890 kWh or 30 Gcal)	cooking, water heating and central heating
D_4	1047 GJ (i.e. 29 750 kWh or 250 Gcal)	block central heating for at least 10 dwellings

For industrial uses, an important factor apart from the annual quantity consumed is the regularity with which the consumer takes gas from the network. This is the concept of modulation (or load factor). The daily modulation indicates the number of days it would take to reach the annual consumption if the maximum were consumed each day. The hourly modulation indicates the number of hours it would take to reach the annual consumption if the maximum were consumed each hour. These factors thus determine the peaks in consumption or the consumer's maximum daily and hourly offtake.

For example, in the case of a user who consumes 41 860 GJ a year, a load factor of 200 days means that the maximum daily offtake is 209 GJ (41 860 divided by 200), and a load factor of 1 600 hours means that the maximum hourly offtake is 26 GJ (41 860 divided by 1 600).

(1) For the United Kingdom there is an additional standard consumer, i.e. 33.49 GJ (9 300 kWh or 8 Gcal).

Seven standard industrial consumers, coded I_1 to I_5 and defined as follows, have been taken:

	ANNUAL CONSUMPTION	LOAD FACTOR
I_1	418.6 GJ (i.e. 116 300 kWh or 100 Gcal)	no load factor laid down
I_2	4 186 GJ (i.e. 1 163 000 kWh or 1 000 Gcal)	200 days
I_{3-1}	41 860 GJ (i.e. 11.63 GWh or 10 000 Gcal)	200 days 1 600h
I_{3-2}	41 860 GJ (i.e. 11.63 GWh or 10 000 Gcal)	250 days 4 000h
I_{4-1}	418 600 GJ (i.e. 116.3 GWh or 100 Tcal)	250 days 4 000 h
I_{4-2}	418 600 GJ (i.e. 116.3 GWh or 100 Tcal)	330 days 8 000 h
I_5	4 186 000 GJ (i.e. 1 163 GWh or 1 000 Tcal	330 days 8 000 h

It can be seen that certain standard consumers have the same load factor for different volumes of consumption or, conversely, different load factors for the same volume of consumption; the reason for this is to enable the effect of these conditions of supply on the level of prices to be observed. The higher the load factor (in days or hours) the more regular the offtake of gas, thus in some cases, enabling the consumer to obtain favourable prices.

Moreover, the load factor gives some idea of the use made of installations consuming gas. Thus, a very high load factor, e.g. of 8 000 hours, is obviously equivalent to an installation functioning practically non-stop, day and night, throughout the 8 760 hours in the year.

All the prices recorded in this study for standard industrial consumers normally relate to non-interruptible supplies, i.e. the seller of gas must supply the quantities demanded by the consumer (whose peaks are determined by the modulation laid down for standard consumers). In some cases there are interruptible contracts, under which the seller of gas can reduce the quantities supplied to the consumer at certain peak times when the network is overloaded. In return for this reduction of supply, the customer pays a reduced price.

It should be noted finally that the standard industrial consumers referred to in this study include neither power stations nor industries using gas for non-energy purposes, e.g. the chemical industry.

4. Definition of the price levels recorded

The prices include meter rental, the standing charge, the commodity rate, etc. They are shown per unit of gas sold, i.e. per Gigajoule (GJ, GCV). This unit price is obtained by dividing the total amount paid by the user for the level of consumption in question by the number of units (GJ) of gas consumed.

In each case, three values are shown:

- the price net of tax
- the amount of tax
- the selling price (inclusive of all taxes).

The taxes referred to above are those levied directly on the sale of gas to the consumer. The taxes levied prior to this, such as direct company tax or income tax (which obviously contribute to the manufacturing costs), are not shown separately in this study.

In all but a few cases (which are clearly indicated) the amount of taxes shown in this study corresponds to value added tax. With this dual presentation of prices, VAT may thus be either included or excluded, depending on the aims of the economic analysis being carried out.

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), which is outlined and explained in the following section.

III. UNITS OF VALUE

Gas prices are recorded and presented in national currencies whose real value - or purchasing power - depreciates to a greater or lesser degree in the course of time because of the general trend towards inflation. These price measurement units are therefore not stable, in contrast to scientific quantitative units which have a fixed definition and a constant value. For example a joule represented exactly the same amount of energy in 1973 as in 1980, whereas the Lira would not buy the same volume of goods or energy in 1980 as in 1973. Consequently, the unit price of energy expressed in a national currency conceals an unstable ratio which is gradually eroded in the course of time. This presents a problem of comparability in time.

In addition, comparisons between countries of prices expressed in national courrencies necessitate conversion into a common unit. There is no doubt that the usefulness of market exchange rates for this conversion is declining. To resolve this problem, a unit which allows more useful comparisons between countries should used. Purchasing power parities would be best suited to these purposes; i.e. a unit of measurement of values which takes into account the relative purchasing power of the currencies of the countries being compared. Such a unit therefore eliminates under- and over-estimates of exchange rates on the international market and is based on the general price levels of the countries concerned. It shows the purchasing capacity of each currency in relation to that of other currencies.

The purchasing power parity is the ratio between two currencies which shows, for example, the number of Belgian Francs equivalent to one Deutsche Mark. A Purchasing Power Standard was defined in order to facilitate comparison between countries and with the European Unit of Account.

It is defined as follows: The purchasing power parity between the Purchasing Power Standard and each national currency expresses the number of national currency units required to purchase in each country of the Community the same volume of goods and services as would be obtained with one Purchasing Power Standard (PPS) in the Community.

The purchasing power of the currencies compared with the PPS was calculated in 1975 from the basic parities of some 1 000 goods and services, comprising 700 products included under the final consumption of households, 200 under gross fixed capital formation and 100 under collective consumption of general government. These rates were then extrapolated, taking into account the evolution of price levels in the different countries. The conversion factors between national currencies and PPS for the years covered by this study are given in Table n° 29 in the Annex.

These current PPSs can only be used for comparisons between countries in a given year, because they do not eliminate the general increase in prices in the nine member states which takes place in the course of time. To take this general inflation into account a correction factor or a "deflator" which compensates for monetary depreciation must be used. The deflator chosen for this study is the implied index of prices for total domestic uses. It is very similar to the implied gross domestic product price index, but is more closely connected to the PPS.

With the help of this index, it is possible to draw up a price series corrected for inflation during the period considered. The total domestic uses indices for each country of the Community are given in Table n° 29 in the annex, with 1973 as the base year.
The deflated price series was calculated as follows:

1) the prices in national currencies are converted to indices (1973 = 100)

2) these indices are deflated by the total domestic uses price index of each country.

Thus a price index, based on 1973 and corrected for the effects of general inflation in each country, is obtained.

On the basis of this description, the results of this survey of gas prices in the Community are presented using three chronological series:

1) A series of gas prices at face value in the national currency of each country (Tables 1 to 28 in the Annex). This series allows regional comparisons within a country and comparisons in time at face value (apparent price).

2) A series of gas prices in current PPSs (Tables 30, 31, 33 and 34 in the Annex) which allows international comparisons of price levels at a given date.

3) A series of gas price indices, corrected for inflation, base year 1973, which allows comparisons in time to be made (Tables 32 and 35).

IV. SUPPLY, CONSUMPTION AND GENERAL DATA

This chapter gives some general information relative to the supply and consumption of gas in the Community countries.

Table A, which applies to natural gas only, shows production, external trade and the consumption of the three main consumer sectors i.e. industry, powerstations, and households. These figures come from the harmonised balancesheets drawn up by the Statistical Office of the European Communities. More detail can be found in the "Energy Statistics Yearbook" - edition EUROSTAT 1979 and 1980. In these balancesheets the dinstinction between industry and households does not always correspond to the field of application of the various tariffs and thus to the prices recorded.

Continuing on from this, table B gives some further information relating to households, which is intended to show the penetration of gas in this sector and where possible to give an idea of the extent of gas heating.

Table C brings together some information on industry, to show the importance of the use of gas in industrial activity.

A. SUPPLY AND DELIVERIES OF NATURAL GAS 1977/78/79

1000 TJ (GCV)	1977							1978							1979 (2)						
	FR GERMANY	FRANCE	ITALY	NETHER-LANDS	BELGIUM	LUXEM-BOURG	UNITED KINGDOM	FR GERMANY	FRANCE	ITALY	NETHER-LANDS	BELGIUM	LUXEM-BOURG	UNITED KINGDOM	FR GERMANY	FRANCE	ITALY	NETHER-LANDS	BELGIUM	LUXEM-BOURG	UNITED KINGDOM
Production (1)	1 673.0	298.9	526.1	3 407.4	1.3	-	1 534.8	720.0	307.1	526.0	3 120.2	1.3	-	1 517.6	741.9	301.5	500.0	3 308.8	1 3	-	1 493.0
Imports																					
from NETHERLANDS	884.0	456.0	139.5	-	388.5	19.3	-	718.1	451.5	138.7	-	341.0	21.1	-	309.8	435.1	163.6	-	354.0	22.0	-
from NORWAY	36.9	16.8	-	10.2	10.3	-	36.7	204.7	68.2	-	61.9	54.9	-	170.6	263.7	79.5	-	98.4	80.0	-	322.0
from ALGERIA	-	105.6	-	-	-	-	33.7	-	117.6	-	-	-	-	28.7	-	120.0	-	-	-	-	25.0
from LIBYA	-	-	98.9	-	-	-	-	-	-	94.9	-	-	-	-	-	-	79.6	-	-	-	-
from USSR	195.9	-	256.0	-	-	-	-	300.8	-	308.5	-	-	-	-	351.6	-	315.9	-	-	-	-
from OTHERS	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exports	6.2	-	-	1 910.2	-	-	-	10.2	-	-	1 691.3	-	-	-	6.7	-	-	1 839.4	-	-	-
Deliveries	1 726.5	795.1	997.2	1 482.5	386.1	18.8	1 543.0	1 891.7	844.8	1027.0	1 494.0	383.3	20.7	1 618.4							
of which:																					
Industry (3)	599.0	270.6	446.9	304.1	148.9	8.8	459.9	631.9	298.6	431.5	306.7	139.5	10.6	453.4							
Power Stations	578.4	92.0	113.8	449.0	88.3	6.8	65.8	647.9	61.2	107.9	400.0	73.2	6.3	47.1							
Households	284.3	195.0	303.6	433.1	85.8	3.0	690.5	341.3	220.1	344.2	470.2	101.3	3.6	764.1							

(1) including gas recovered from coalmines and sewage gas
(2) provisional
(3) energy uses only

B. GENERAL DATA CONCERNING HOUSEHOLDS 1978

	Units	FR Germany	France (Gaz de France)	Italy	Netherlands	Belgium	Luxem-bourg	United Kingdom	Ireland	Denmark
Population	1 000	61 326.5	53 277.3	56 713.8	13 941.7	9 839.5	357.6	55 902.4	3 311.2	5 104.2
No. of households	1 000	23 940	17 750	15 990	4 400	3 240	100	18 550	730	1 800
No. of domestic gas customers	1 000	7 200	7 680	7 256	4 157	1 719	59	13 963	152 (1)	470 (2)
Gas consumption of households	1 000 TJ	341.3	286.5	344.2	470.2	101.3	3.6	764.1	2.3 (1)	4.2 (3)
Average consumption per customer	GJ	47.40	37.3	47,4	113.1	58.9	.	54.7	15.1 (1)	9.0 (3)
No. of homes with gas central heating	1 000	2 600	2 127	.	3 550	1 000	.	5 500	21 (1)	2 (2)
No. of dwellings with collective heating by gas	1 000		866	.	.		.	.	-	.

(1) Dublin

(2) Copenhagen

(3) estimated

C. GENERAL DATA CONCERNING INDUSTRY 1978

	Units	FR Germany	France (Gaz de France)	Italy	Nether-lands	Belgium	Luxem-bourg	United Kingdom	Ireland	Denmark
Turnover of industry	10^6 PPS (1)	387 999	260 919	199 900	56 035	46 368	2 155	322 147	11 654	16 333
Persons employed in industry	1 000	8 681	6 952	4 061	1 175	973	50.7	8 864	2 115	405
Gas consumption of industry (2)	1 000 TJ	631.9	282.2	431.5	304.1	139.5	10.6	453.4	0.61 (3)	0.68 (4
Numbers of industrial gas customers	1 000	14.1	14.3	21	17.5	.	.	70	3 (3)	5.5
Average consumption per customer	GJ	44 816	19 734	20 540	17 377	.	.	6 477	204 (3)	123 (4

(1) see definitions in chapter III

(2) power stations not included

(3) Dublin

(4) estimated

1. FR GERMANY

a) Situation in the gas industry

Several hundred gas undertakings operate in FR Germany and may be classified into three categories:

	n°
- producers of natural gas	5
- gas transporters (Ferngasgesellschaften)	9
- gas distributors	474

The producers and transporters sell gas to certain large consumers and also supply the distributors.

The latter are therefore mainly retailers although 94 of them also produce gas.

Gas sales made up as follows:

%

BUYERS	SELLERS			TOTAL
	Natural gas Producers	Gas Transporters	Distributors	
Industry and Power Stations	9	30	28	67
Households	-	0	21	21
Commerce and handicraft	-	0	4	4
Public Admin.	-	0	4	4
Heating stations and others	0	0	4	4

In 1979 the number of gas customers was as below:

	1 000 n	Standard consumers
Households	7 210	
of which: tariffs	(4 600)	D_1 D_2
contracts	(2 600)	D_3 D_4
Commerce, small industries	285	I_1 I_2
Public Administration	31	-
Industry	14	I_3 I_4 I_5
Others		

Also, more than 500 000 households were heated by heating stations run on gas.

The largest number of customers receive gas via the distributors. The producers and transporters supply directly only a small number of large consumers: 50 power stations, 1 300 industries and around 1 000 public administrations.

The six locations chosen for this study, which correspond to six distribution companies, represent a quarter of the gas sold in FR Germany by the distributors.

In 1979 natural gas dominated the market with 95 % of the consumption, as opposed to 5 % manufactured gas (not including cokeries gas and blast furnace gas which are used by their manufacturers). Therefore this study refers only to natural gas prices.

The sources of supply of natural gas continued to diversify in 1979:

domestic production	34 %
imports from:	
Netherlands	38 %
USSR	16 %
Norway	12 %
	100 %

b) Taxes

Sales of gas are subject to value added tax (VAT). On 1 July 1979 the rate of this tax, which applies to the price before tax, was raised from 12 % to 13 %. This tax is deductible for industrial and commercial customers.

c) Household prices - tariffs

According to law the distributors must offer small customers several two-part tariffs, presenting different ratios between the standing charge and the commodity rate.

In general three tariffs are available:

a) small users (Kleinverbrauchstarif)
b) two-part tariff n° 1 (Grundpreistarif 1)
c) two-part tariff n° 2 (Grundpreistarif 2)

with an increasing standing charge and a decreasing commodity rate.

Several examples of these tariffs, valid at the beginning of 1980, are given below:

Location	Tariff	Standing Charge DM/month	Commodity Rate Pf/kWh
Hamburg	a)	2.85	9.80
	b)	8.10	5.67
	c)	13.60	4.30
Düsseldorf	a)	4.50	7.12
	b)	12.50	3.95
	c)	29.00	3.09
Frankfurt	a)	6.10	8.06
	b)	14.75	4.05
	c)	18.65	3.71
München	a)	2.80	6.54
	b)	4.20	5.24
	c)	8.45	3.92

In some towns a two-part block tariff combines the three tariffs above and leads to slightly cheaper prices for the customer.

In some cases, the standing charge depends on the number of rooms in the dwelling (for example, Hannover). These tariffs apply only to D_1 and D_2 (sometimes D_3). Above this level of consumption special contracts (Sondervertrage) exist for individual central heating and the heating of an appartment block (collective heating).

d) Household prices - analysis

The results are given in Tables n° 1-3 in the annex.

With one exception only, the increase in prices during the reference period remains moderate - 1 to 8 % for small consumers (D_1 D_2) and 1 to 10 % for individual central heating, depending on the location. These increases took place during 1979 as no changes in tariffs occurred between January 1978 and January 1979. In certain towns the increase (1 %) comes solely from the increase in the rate of VAT (Düsseldorf, Stuttgart, Hamburg for D_1 D_2). The smallest increases were applied to the small consumers. This results in a very small decrease in tariff degression. Thus the reduction in unit price between a consumption of 8.37 GJ/year and a consumption of 1 047 GJ/year is:

	1978	1980	% D_4/D_1
Hamburg	- 67 %	- 64 %	
Hannover	- 59 %	- 58 %	
Düsseldorf	- 64 %	- 64 %	
Frankfurt	- 70 %	- 69 %	
Stuttgart	- 63 %	- 63 %	
München	- 62 %	- 52 %	

Without taking changes in tax into account, a certain stability in tariffs, and thus prices, is noticeable. The prices without tax remained unchanged between

1977 - 1980 in Hamburg (except for D_3 D_4)
1976 - 1979 in Hannover
1976 - 1980 in Düsseldorf
1978 - 1980 in Stuttgart
1976 - 1979 in München (except for D_4)

This period of calm contrasts with the sharp increases noted after the 1973 crisis. However further increases have been agreed for during 1980.

Price differences between towns depend on the level of consumption as the tariffs and the degression curves vary from one town to another. However, prices in München and Hannover are consistently low. The range of prices remains large e.g. + 50 % difference between the extreme locations for D_1. This dispersion is less for larger consumers, + 37 % for individual central heating and + 12 % for collective heating (D_4). A comparison may be attempted between the Gross Domestic Product price indices, the average receipts from sales to households and the selling price of gas in Düsseldorf (chosen as being fairly representative).

1973 = 100

		average(1) receipts	D_1	D_2	D_3	D_{3b}	D_4
1978	126.9	146.5	152.4	139.2	176.7	171.3	176.9
1979	131.6*		152.4	139.2	176.7	171.3	176.9
1980	137.5*		153.8	140.5	178.3	173.0	178.4

* estimated
(1) West Germany

The indices of gas prices remain above those for all goods and services, although prices have been almost stagnant for the last four years. The average receipts have increased by less than selling prices because of the increase in the average consumption per customer (the effect of tariff degression). Between 1973 and 1978 the average consumption per domestic customer increased by 75 %.

e) Industrial prices - tariffs

For industrial consumers no tariffs are published, except for some tariffs for professional uses (Gewerbetarif) which may be applied in some cases to the smallest non-domestic customers (I_1).

Apart from these, selling prices result from special contracts which generally take into account three parameters:

1) standing charge, fixed and independant of consumption
2) offtake charge, which depends on either the capacity of the installations or the maximum daily or hourly offtake (modulation)
3) commodity rate, most often a single price per unit consumed.

These contracts are revised periodically so as to keep prices in line with those of competing fuels. In general gas prices are aligned, with some time lag, with prices of fuel oils.

f) Industrial prices - analysis

The results are given in Tables n° 4-6 in the annex.

In this study the data has been completed to the extent that prices representative of the whole of industry are now available, with the exception of some very large industries (I_5 and over) which are directly supplied by the transmission companies which did not take part in this study.

In Table 5 prices for I_1 in Frankfurt are for special contracts which are now more common.

Except for I_1 whose prices developped in line with domestic tariffs, industrial prices have increased quite sharply during the period 1978-1980. These increases vary from one standard consumer and location to another. Stuttgart had the smallest increases (10 - 13 %) although it remains the most expensive location. Düsseldorf suffered the largest increases (35 - 48 %) and consequently becomes one of the more expensive locations.

Hannover remains the cheapest location. With a few isolated exceptions the largest increases took place during 1979.

Tariff degression has continued to fall i.e.

	1978	1980	I_4/I_1
Hamburg	- 61 %	- 54 %	
Hannover	- 46 %	- 27 %	
Düsseldorf	- 53 %	- 31 %	
Frankfurt	- 33 %	- 16 %	
Stuttgart	- 23 %	- 14 %	
München	- 38 %	- 27 %	

The differences in prices noted between $I_{3-1} - I_{3-2}$ and $I_{4-1} - I_{4-2}$ respectively depend either on the modulation or on the installed capacity, which is often taken into account in the contracts.

As the contracts and degression curves differ largely from one location to another the regional dispersion remains large and variable depending on the standard consumer.

A comparison between the Gross Domestic Product price index (GDP) and selling prices gives the following results:

Düsseldorf - selling price 1973 = 100

	G.D.P.	I_1	I_2	I_{3-1}	I_{3-2}	I_{4-1}	I_{4-2}
1978	126.9	136.8	173.8	186.4	185.6	229.8	230.7
1979	131.6*	136.8	173.8	186.4	185.6	248.5	250.9
1980	137.5*	138.1	239.6	252.5	252.6	337.5	341.3

* estimated

With the exception of the smallest industrial consumers (I_1), the price of gas to industry has increased by much more than prices for all goods and services, as represented by the GDP price index. Therefore in real terms gas has become more expensive.

2. FRANCE

a) Situation in the gas industry

In France gasworks gas has almost disappeared from the market and therefore this study covers only natural gas.

Natural gas sales may be broken down as follows:

%

CUSTOMERS	SELLERS (1) Gaz de France	(2) Private societies and "regies"	(3) Société Gaz du Sud-Ouest	CEFEM	SNEA(P)	TOTAL
Domestic uses (individual and collective)	33	2	-	-	-	35
industry	32	0	7	6	2	47
public power stations (EDF)	-	-	-	-	5	5
commercial and other uses	13	0	-	-	-	13
TOTAL	78	2	7	6	7	100

(1) represented in this study by Toulouse (except I_4 I_5), Lille, Paris, Lyon and Marseille.
(2) represented in this study by Strasbourg.
(3) represented in this study by Toulouse (I_4 I_5)

Therefore the national enterprise Gaz de France dominates the domestic and industrial market. The following table gives further information on the sales of this enterprise, in 1979:

	Sales %	Customers 1 000 n	Standard consumers
Domestic uses:			
heating tariffs	28	2 621	D_3 D_{3b}
other tariffs	6	5 059	D_1 D_2
Commercial and similar (1)	24	258	D_4 I_1 I_2
Industry	42	14	I_3 I_4 I_5

The expansion of natural gas sales continues and the number of customers is expected to exceed 8 100 000 during 1980.

This expansion was accompanied by changes in supply:

- imported natural gas accounted for 70 % of supplies in 1979;
- supplies of natural gas are diversifying as regards both origin and point of entry (in 1979: south-west France 30 %, Netherlands 49 %, Algeria 13 %, Norway 8 %).

At the end of 1979 natural gas began to arrive from the USSR.

b) Taxes

Gas sales are subject to 17.6 % value added tax, based on the price net of tax. VAT is recoverable in the case of industrial and commercial consumers.

c) Household prices - tariffs

The tariffs for"retail" or "semi-wholesale" sales are of the two-part type. The range of tariffs has been simplified and standardized throughout France. In places supplied with natural gas, the range also includes standardized prices for tariffs for small consumers and a limited number of price levels for tariffs for larger consumers.

As an example, the table below shows the tariff components applicable in the whole area supplied by Gaz de France at the beginning of 1980.

Standard consumer	Tariff	Standing charge FF/year	Commodity rate FF/GJ
D_1 D_2	Bo	144.00	40.56
D_3 D_{3b}	3G	897.48	21.71
D_4	B_2 Heating	1 547.64	21.96

Tarif B_2 applies also to commercial uses and similar (standard consumers I_1 and I_2 in this study).

(1) including collective heating

d) Household prices-analysis

The results are given in Tables n° 7-9 in the annex.

Since 4th January 1980 prices for Gas de France domestic customers have been unified and only one tariff system now exists (with the exception of Strasbourg which is not served by Gaz de France, and operates a separate tariff system).

In order to arrive at this unified tariff system the rates of increase varied from one region to another. Between the beginning of 1978 and the beginning of 1980, prices have increased as follows:

D_1	39,5 - 41,2 %
D_2	40,9 %
D_3	44,5 - 53,6 %
D_{3b}	48,1 - 56,7 %
D_4	52,3 - 56,4 %

The prices rises were irregular: a rise of 10 % in May 1978 and varying increases during 1979 and at the beginning of 1980 (4th January), which affected the large consumers most, and reduced tariff degression.

Degression (the reduction in unit price when consumption increases from 8,37 GJ to 1 047 GJ) has decreased from - 63 % in 1978 to - 59,5 % in 1980.

In Strasbourg, during this period, price increases ranged from 25 % (for D_1) to 40 % (for D_4). This means that prices of gas for heating is now lower than the rest of the country and prices for small consumers are higher.

These large increases in selling prices are caused by the cost price of imported gas, which increased by 65 % in one year.

A comparison between the selling price of gas, the gross domestic product (GDP) price index and the average receipts of Gaz de France, gives the following results:

1973 = 100

	GDP index	Average receipts (1)	Selling price - Paris region D_1	D_2	D_3	D_{3b}	D_4
1978	164.8	159	162.3	161.6	169.2	175.3	220.3
1979	181.7(2)	166(2)	178.6	177.8	187.5	195.9	241.9
1980	206.7(2)	.	226.4	227.6	251.4	268.1	344.6

(1) Gaz de France - all domestic uses.
(2) provisional and estimated.

It can be seen that prices for small consumers (D_1, D_2) developped more or less in line with the GDP price index, which means that price increases only compensated for monetary devaluation.

However this is not the case for those who use gas for heating (standard consumers D_3 and D_4); their gas prices always increased by more than the GDP price index, which means that gas has become more expensive not only in current terms but also in "constant currency" terms.

The average income per unit sold tended to increase at a slower rate than selling prices, because of the increase in the average consumption per customer (the result of tariff degression). In spite of the price rises, the average consumption per customer continues to rise (by around 35 % since 1973) because natural gas for heating is still attractively priced compared with domestic heating oil.

e) Industrial prices-tariffs

The locations chosen for this study represent the three tariff systems:

Lille, Paris, Lyons, Marseilles, Toulouse (I_1, I_2 I_3): Gaz de France
Toulouse (I_4 I_5): Société du Gaz du Sud Ouest
Strasbourg : Municipal company.

For Gaz de France two types of tariff exist: the type B for small industrial consumers (I_1 I_2) and type S or suscription tariffs for larger industrial consumers (I_3 I_4 I_5).

The B tariff is already explained in section C as it is also applied to heating.

The tariffs for large industrial consumers I_3 I_4 I_5 have a more complex structure than those described above: they are $^4S^5$ tariffs, which can be offered up to the maximum potential supply and subject to special supply conditions.

New subscription tariffs were introduced on 1 December 1979, the old ones being abolished on the same date. The rules for the application of the new tariffs are exactly the same as the previous ones.

The old subscription tariff structure had been drawn up when the Lacq field was developed, and were subsequently extended to the whole of the transmission grid. The structure of these tariffs was no longer a satisfactory reflection of trends in costs, the conditions of competition and the diversification of the sources of supply.

In particular, the differences in tariff levels for the major transmission routes, which were justified when the latter were supplied continuously from a single source, were no longer suitable for an interconnected grid in which the flows of gas are reversed according to the season, the existence of underground reservoirs or supplies.

For some years, the extent of these differences had been limited when the price increases authorized by the public authorities were imposed, although this had had an adverse effect on the simplicity of the tariff structure.

The structure of the new subscription tariffs is simpler than that of the old tariffs. It comprises:

- an identical annual subscription for every point on the grid;
- a daily standing charge on the customer's daily demand (kWh/day);
- a commodity charge per kilowatt hour for two blocks of consumption.

These tariffs have two versions corresponding to the type of network to which the customer's installations are connected, namely the SR tariff for installations connected to the public distribution network and the ST tariff for installations connected directly to the transmission grid.

A single tariff is applied to the major interconnected transmission routes linking the country's sources of gas; prices for the minor routes are obtained by adding the charges specific to each one to this tariff.

Like the old tariffs, the new subscription tariffs relate to the index N as defined by the formula:

$$N = \frac{50F}{Fo} + \frac{50C}{Co}$$

where C represents the wholesale price of French raw coal as published by the Institut National de la Statistique et des Etudes Economiques; et
F represents half the sum of the Atlantic and Mediterranean zone ex-refinery prices for N° 2 heavy fuel oil on the wholesale market.
Co and Fo are the value of C and F at 31 January 1959.

As at 1 December 1979, their components corresponded to a value of 426 for the index N.

The index N applies to all elements of the tariff formulae. Also, the commodity rates vary not only according to N, but also by adding a supplement to the absolute value per kWh.

As an example, the table below shows the tariff components applicable in the Paris region:

N = 426

Standard consumer	Tariff	Annual suscription charge	Standing charge (1)	Commodity rate
I_3	SR	FF 24 000	FF 43.42/GJ	Up to 24 x 10^6 kWh/year FF 13.23/GJ excess FF 12.68/GJ
I_4 I_5	ST	FF 24 000	FF 33.69/GJ	Up to 24 x 10^6 kWh/year FF 13.09/GJ excess FF 12.54/GJ

(1) per GJ maximum daily offtake

The prices in force as at 4 January 1980 are calculated by applying the index N = 453.7 plusan increase of FF 1.67/GJ in the absolute value of the commodity rate.

f) Industrial prices - analysis

The results are given in Tables n° 10-12 in the annex.

With the exception of Strasbourg, tariffs for small industrial consumers I_1 and I_2 are uniform throughout the country, as of 4th January 1980. During the period under consideration these consumers suffered rises of between 36 and 66 %, the largest increases being applied during 1979, and being applied to the regions which were originally cheapest, in order to arrive at a uniform national tariff.

For Gaz de France's larger industrial consumers (I_3 I_4 I_5) prices were unchanged between January 1978 and January 1979, but suffered the following increases during 1979:

I_{3-1}	35 - 51 %
I_{3-2}	51 - 66 %
I_{4-1}	65 - 80 %
I_{4-2}	75 - 82 %
I_5	80 - 87 %

These increases are due to changes in the index N which is influenced by the price of oil.

Gas supplied to Toulouse industry (I_4, I_5) by Gaz du Sud Ouest is cheeper than Gaz de France because of the proximity of the French gas fields.

Nevertheless, the regional price differences are small, around 5 % in 1980.

As the largest price increases were applied to the larger consumers tariff degression was considerably reduced. Thus, the reduction in unit price between standard consumers at either end of the range (I_1 and I_5) fell from - 51 % to - 36 % in Paris between 1978 and 1980.

The modulation (maximum daily offtake) has a small influence on prices, for example, prices are reduced by around 3 % when the modulation is increased from 200 days to 250 days, and by 2,5 % when modulation passes from 250 days to 330 days (standard consumers I_3 and I_4).

A comparison between the Gross Domestic Price index (GDP) and the selling prices of gas gives the following results:

1973 = 100

	GDP price index	selling price - Paris region						
		I_1	I_2	I_{3-1}	I_{3-2}	I_{4-1}	4-2	I_5
1978	164.8	157.1	151.4	230.6	232.2	229.3	231.7	246.2
1979	181.7	161.6	154.4	230.6	232.2	229.3	231.7	246.2
1980	201.7	225.9	222.3	347.5	384.9	413.9	421.3	460.9

(The average receipts for industrial consumers is not available).

With the exception of small industrial consumers (I_1 I_2) the selling price of gas increased by more than prices for the whole of goods and services, as measured by the GDP price index. Natural gas has become more expensive not only in current terms, but also in real terms.

In spite of these price increases the average consumption of industrial gas consumers continues to increase (+ 70 % approx. since 1973) because gas is still attractively priced compared with heavy fuel oil (low sulphur content).

3. ITALY

a) Situation in the gas industry

The structure of the gas industry, which has a considerable influence on price formation, has two levels:

- SNAM, a company of the ENI group, which is the sole producer, importer, transporter and wholesale distributor of natural gas. In particular, SNAM supplies gas directly to industries consuming over 700 000 m^3 a year (1) (i.e. approximately 27000 GJ), as well as to the distribution undertakings.

- The gas distributors, whose function is to distribute gas to small consumers. They receive natural gas from SNAM and resell it either as it is or mixed with other gases. In some cases, they also produce manufactured gases. These distributors (approximately 1 300 local networks in 1980) are either local authorities, municipal undertakings or concessionary companies.

SNAM applies a standard national tariff. On the other hand, each distributor issues its own tariffs according to a method introduced in 1973 by the Interministerial Price Committee (CIP), which takes into account not only the costs of raw materials but also a series of other factors which vary from one local authority to another. This leads to a profusion of tariffs, which would be impossible to describe in this study and which explains the differences in prices for small consumers from one location to another.

In 1979 gas ressources comprised 98 % natural gas (produced domestically or imported) and 2 % works gas (excluding coke-oven gas and blast furnace gas, which the works retain for their own use).

Natural gas sales are made up by the following:

	%	Standard consumer
SNAM direct sales	62	
i.e. industry	(45)	I_3 I_4 I_5
i.e. power stations	(8,1)	-
i.e. chemical synthesis	(8,9)	-
SNAM sales to distributors	37	
i.e. household uses	(34)	D_1 D_2 D_3 D_4
i.e. Non-household uses	(3)	I_1 I_2
sales as motor fuel	1	-

In 1979 the number of subscribers was broken down approximately as follows:

Supplied by SNAM 4 500	industry chemical synthesis other distribution companies	3 000 22 228 1 250
Supplied via distributors 7 400 000	households (1) shops small industries	7 256 000 126 000 18 000

(1) Including collective heating

Over the past few years the sources of natural gas supplies have diversified, to the detriment of national production:

	1978	1979
Domestic production	48 %	47 %
Netherlands	13 %	15.5 %
USSR	30 %	30 %
Libya	9 %	7.5 %

b) Taxes

An order in Council of 7 February 1977 introduced a consumption tax (imposta di consumo) on sales of natural gas for household uses, at a rate initially fixed at LIT 30 per m^3 and increased to LIT 36.50 per m^3 from September 1979. This tax also applies to natural gas mixed with other gases. Manufactured gas is also subject to this consumption tax in proportion to the percentage of natural gas used in its manufacture (circular n° 59 of July 1977).

Thus in 1980, the consumption tax on the manufactured gas included in this study is as follows:

LIT 14.50 per m^3 in Milan (20 630 kJ/m^3)
LIT 12.80 per m^3 in Rome

the differing rates being due to the different composition of the two gases.

In addition, value added tax (VAT) is levied at the rate of 6 % for household uses and 14 % for other uses, to ba calculated on the price net of VAT but including the consumption tax. VAT is deductible in the case of commercial and industrial consumers.

c) Household prices - tariffs

Each distribution undertaking calculates a basic price in accordance with a complex formula, laid down in law by the Interminaterial Price Committee (for further details see CIP Regulations N°s 20/1975 and 32/1977). The prices charged to consumers vary around this basic price,

depending on the tariff degression curves determined by the ratio between fixed and commodity costs.

This leads to two- or three-part tariff formulae, comprising:

meter rental
standing charge (quota di servizio)
commodity rate (sometimes in block form).

The first two components of the formulae depend on the number of "flames", which represent the user's equipment and, therefore, consumption capacity. The contractual number of flames taken into account is determined freely by each distribution undertaking, provided the statutory limits are observed. This number may therefore differ from one location to another. It may also differ between the component relating to meter rental and the standing charge (quota di servizio). The standing charge is degressive and although differing according to the number of flames, is not directly proportional.

For guidance, the number of flames corresponding to the standard consumption levels is roughly as follows:

D_1	10 flames
D_2	10 - 20 flames
D_3	20 - 40 flames
D_{3b}	40 - 50 flames
D_4	100 - 300 flames.

The price of natural gas is affected by SNAM's tariff for sales to distributors. The commodity rate in this tariff varies according to the selling price of heating oil (agreement of 15 February 1979, which provides for LIT 0.81 per m^3 to be passed on to the price of natural gas for each lira increase in the free-to-consumer price per kg of heating oil.

d) Household prices - analysis

The results are given in tables n°s 13, 14, 15 in the annex.
The figures for Naples for 1978 have been revised.

In spite of the differing tariff systems in force throughout the country trends in prices have been the same, moderate rises (even reduction in prices in Rome) during 1978, followed by much larger increases during 1979. Natural gas prices increased as much as manufactured gas prices. The rates of increase vary from one location to another and from one standard consumer to another. Most cities applied smaller increases to the smaller customers, for social reasons. Tariff degression is low around -13 % (D_4 D_1) in all locations (but -23 % in Genoa and - 38 % in Naples) and does not seem to be affected by the type of gas.

Manufactured gas is still quite a bit more expensive than natural gas and the difference in the types of gas is the main reason for the large regional differences in prices.

(3)

ITALY

In spite of the diversity of prices a comparison may be attempted with the Gross Domestic Product price index (GDP). In general the selling price of gas to the smallest consumers did not increase by much more than the prices for the whole of goods and services. This was not the case for gas used for heating purposes.

1973 = 100

	GDP	selling prices: Rome, natural gas				
		D_1	D_2	D_3	D_{3b}	D_4
1978	221.4	233.9	315.5	430.2	460.6	615.5
1979	256.6 *	208.0	267.8	363.2	387.4	515.6
1980	300.0 *	312.4	393.4	580.5	622.3	796.6

* estimated and provisional

e) Industrial prices - tariffs

A distincion must be made between the two systems of gas supply.

1) Small industrial consumers (I_1, I_2) who are supplied by the urban networks of the local distribution companies and for whom the tariffs differ from city to city (the tariffs are two- or three-part, with a standing charge, a charge for meter rental and a degressive commodity rate);

2) Other industrial consumers (I_3, I_4, I_5) who are supplied mainly by SNAM, which applies a standardized national tariff.

Since January 1978 SNAM's prices for non-interruptible supplies have been based on a tariff divided into consumption blocks, directly linked to the price of heavy fuel oil:

Consumption block	Price
< 3 000 000 m^3/year	$P_I = P \times 1.03$
3 - 25 000 000 m^3/year	$P_{II} = P$
>25 000 000 m^3/year	$P_{III} = P \times 0.967$

with $P = 0.845 \times 1.077 (0.7\ ATZ + 0.3\ BTZ + 0.8\ T) \times 0.9842$,

where

P = price of natural gas in LIT per standard m^3 of 38 100 kJ (GCV) (9 100 kcal GCV)

0.845 = ratio of calorific equivalence, in terms of NCV, between natural gas and fuel oil;

1.077 = factor of qualitative advantage of natural gas over fuel oil

ATZ, BTZ = average price of 1 kg of high- and low-sulphur fuel oil respectively at coastal depot, charged by the Milan branch office of AGIP during the month preceding consumption of the gas.

T = average value of the transmission price of 1 kg of high-sulphur fuel oil from the coastal depot to the user's premises, taken from the wholesale price lists of the Milan Chamber of Commerce during the month preceding consumption of the gas.

0.9842 = discount factor of 1.58 %.

The values of P are as follows:

1978	P = 69.86
1979	P = 71.154
1980	P = 125.121

For interruptible types of industrial consumption, the price is given by the formula:

$$P = ATZ \times 0.91$$

Accordingly, P = 65.282 in 1979
P = 118.114 in 1980.

These tariff formulae do not apply to either supplies to power stations (ENEL tariff) or deliveries to local gas distribution undertakings.

The price of gas for chemical synthesis (use for non-energy purposes) is aligned on that of the tariff for non-interruptible types of industrial consumption, except for gas to be used in the manufacture of fertilizer for the domestic market, for which the price was fixed at LIT 58.2/ standard m^3 in 1980 (as against LIT 38.2 in 1978).

It can be seen that SNAM's industrial tariffs do not include any component for the regularity of gas offtake (modulation or load factor). Consequently, the price levels vary solely as a function of the volume of consumption.

f) Industrial prices - analysis

The results are given in tables n° 16 - 18 in the annex.

Because small industrial consumers (I_1 and I_2 in this study) are supplied by local distribution companies prices vary widely from one city to another. However the trends have been similar in all cities, little change in prices during 1978, followed by large increases during 1979. This was caused by a sharp increase in the price charged by SNAM to the distributors. The difference in price between natural gas and manufactured gas is not as large as in 1978. For example the difference in price for Turin (natural gas) and Milan (manufactured gas) was + 60 % for I_1 in 1978 and + 45 % in 1980.

Tariff degression remains low.

For larger consumers, supplied by SNAM, prices are uniform througout the whole country. Between 1978 and 1980 SNAM prices for direct sales, non-interruptible to industry increased by 83 % for all customers. The largest increase took place during 1979, and was because the tariff incorporates the price of heavy fuel oil. Modulation (regularity of offtake) has no effect on prices. Table n° 18 gives an example of prices applied by a local distributor (Genoa) to large industry, which is exceptional. The prices differ little from those applied by SNAM.

There has been no appreciable change in tariff degression. When consumption increases one hundred times I_3 to I_5 the price is reduced by only 5 %.

Finally, a comparison may be made between the GDP price index and the selling prices of natural gas.

1973 = 100

	GDP	Selling price (SNAM)		
		I_3	I_4	I_5
1978	221.4	489	502	495
1979	256.6 *	498	511	504
1980	300 *	897	920	908

* estimated and provisional

It is immediately apparent that gas prices are increasing by much more than the prices of goods and services as a whole, as represented by the GDP index. Natural gas is thus becoming more expensive not only at current prices but also in constant terms (base 1973). However, it should be borne in mind that natural gas was supplied at a particularly low price in 1973 for two reasons: firstly, the quantities available from national gas fields were sufficient at that time, and, secondly, in order to compete with petroleum products which had not yet felt the impact of the crisis and were cheap in Italy at that time.

4. NETHERLANDS

a) Situation in the gas industry

The gas industry has three levels:

1) natural gas production (NAM)

2) transporting, importing and selling to very large consumers connected to the main transmission grid (GASUNIE)

3) distribution (local societies or communal enterprises).

Direct sales by GASUNIE represent around 45 % of the volume of gas sold (20 % of which goes to power stations), the remaining 55 % is supplied to the public via the distribution companies.
GASUNIE supplies 136 distribution companies, 29 power stations and 389 large industrial enterprises.

For the distribution companies the number of customers and gas sales may be broken down as follows:

	Customers 1 000 n	Sales %	Standard consumers
- Small Consumers	4 375	65	
i.e. ⩽ 21 GJ/year	606	1	D_1 D_2
21-6000 GJ/year	3 766	63	D_3 D_4 I_1 I_2
reduced tariffs	3	1	-
(of which domestic consumers)	(4 160)	(53)	$D_1 \longrightarrow D_4$
- Large Consumers (⩾ 6000 GJ/year)	18	35	I_3 I_4 I_5
TOTAL	4 393	100	

Although the distribution system is decentralised, the tariff system is uniform (with reductions, however, in the areas close to the Groningen gas fields) and prices indicated for Rotterdam are respresentative for the whole country.

The Groningen gas fields remain the principal source of natural gas consumed in the country. However, during the last three years imports of gas from Norway have been increasing, as part of the policy to conserve national ressources.

These imports from Norway reached:

in 1978 - 62 000 TJ i.e. 4% of inland consumption
in 1979 - 98 000 TJ i.e. 6 % of inland consumption.

b) Taxes

The rate of value added tax (Belasting toegevoegde waarde) was increased from 4 % to 18 % of the price net of tax with effect from 1 April 1978. VAT is deductible in the case of industrial and commercial consumers.

In addition, a special air pollution levy (Heffingbrandstoffen luchtverontreiniging) is charged on household tariffs only, at a rate of 0.03 cents per m^3, i.e. approximately HFL 0.01/Gigajoule.

c) Household prices - tariffs

All small consumers (domestic, commercial, industrial, etc.) with an annual consumption of up to 170 000 m^3 are charged according to a simple two-part tariff system, the rates of which are revised periodically. The general tariff, which applies to standard consumers D_1, D_2 and D_3, is as follows:

Date	Blocks of Annual Consumption	Standing Charge HFL/year	Commodity Rate cents/m^3
January 1978	0 - 600 m^3	45	27
	601 - 170 000 m^3	69	23
January 1979	0 - 600 m^3	45	27
	601 - 170 000 m^3	57	25
January 1980	0 - 600 m^3	48	29
	601 - 170 000 m^3		

There is also a tariff for collective central heating (Blokverwarmingstarief), which applies to standard consumer D_4:

Date	Standing Charge HFL/year	Commodity Rate cents m^3
January 1978	12n (minimum 150)	23
January 1979	12n (minimum 150)	25
January 1980	15n (minimum 180)	29

n = number of appartments

These tariffs are based on a standard m^3 of 35.17 MJ (GCV).

d) Household price - analysis

The results are given in Table n°. 19 in the annex.

Between the beginning of 1978 and the beginning of 1980 prices for domestic customers have increased by between 22 % and 43 %. The largest increases were during 1978 and were due largely to increases in the rate of VAT, as prices before tax showed little change during that period.

The rate of increase rises as consumption rises, leading to a reduction in tariff degression. The relative difference in unit price between D_1 and D_4 has been reduced from - 49 % in 1978 to - 40 % in 1980. Nevertheless this degression is still large and encourages the use of gas for heating. At present, 95 % of customers use gas for heating their dwelling. Moreover, the price of natural gas remains very attractive compared with heating gas-oil.

A comparison with the Gross Domestic Product (GDP) price index gives the following results:

1973 = 100

	GDP price index	Selling price D_1	D_2	D_3	D_{3b}	D_4
1978	148.1	141	135	189	212	278
1979	154.5 *	160	154	227	257	343
1980	165 *	171	165	257	293	398

* provisional and estimated

Gas prices have increased by more than prices for all goods and services, represented by the GDP price index. Gas has therefore become more expensive in real terms. Although the difference is not significant for the smallest consumers (D_1 D_2) they represent only a very small part of the clientele.

e) Industrial prices - tariffs

The tariff system introduced on 1 January 1978 is still in force, with a number of minor changes. The tariff is based on blocks of consumption and indexed to fuel oil prices.

Blocks of annual consumption	Price in cents/m^3 1978	1979 and 1980
	= household tariff	
0 - 170 000 m^3	16.0 + 2.8 + C	16.0 + 2.8 + C
170 000 - 1 million m^3	16.0 + 2.2 + C	16.0 + 2.2 + C
1 - 10 " m^3	16.0 + 1.8 + C	16.0 + 1.4 + C
10 - 50 " m^3	16.0 + 1.7 + C	16.0 + 0.0 + C
> 50 " m^3		

These tariffs are based on a standard m^3 of 35.17 MJ (GCV).

C is the adjustment coefficient linked to the price of fuel oil:

$$C = (16.0 \times \frac{P}{200}) - 16.0.$$

P is the annual average price of fuel oil with a viscocity greater than 65 Cst at 50° C and a net calorific value of 41.45 MJ/kg, for deliveries of at least 2 000 tonnes per quarter.

P is calculated annually by the Central Statistical Office (CBS).

As bills are sent every quarter, the prices are calculated on the basis of a provisional value of P estimated by Gasunie. The annual balance is settled at a later date; consumers are contractually exempted from making good any underpayments, whereas any overpayments must be refunded to them.

The value of P is as follows:

1978: P = 197.19
1979: P = 210
1980: P = 295 (provisional).

Customers consuming more than 1 million m^3/year, whose load factor is less than 150 days, pay an additional charge of $(1 - \frac{\text{load factor}}{150})$ cents/m^3.

From now on, all contracts will be concluded on the basis of these tariff formulae, which result in a degressive price depending on the volume of consumption and do not include a component based on the regularity of offtake, except in the case of a low load factor (< 150 days), which does not apply to the standard consumers considered in this study.

f) Industrial prices-analysis

The results are given in Table n° 20 in the annex.

The prices published in the previous study for the beginning of 1978, which were based on a provisional value of P, have had to be corrected. In fact the final value of P was below the provisional value and, according to the tariff regulations, the excess had to be repaid to the customers. This has been taken into account in this study as the aim is to present prices actually paid by the consumer.

During the two years under study, industrial gas prices have become more expensive, by from 41 % to 62 %. This was caused largely by the increase in VAT during 1978, and rapidly rising petrol prices during 1979, especially for standard consumers I_3 I_4 I_5 whose prices are pegged to fuel oil prices by the coefficient $^3P_4$.

Prices without tax increased by from 24 % to 43 % depending on consumption during the same two years.

Prices for small industrial consumers (I_1 I_2) followed the same trends as domestic prices, as the same tariff applies.

It can be seen that the rates of increase differ according to the volume consumed, in general the largest consumers are subjected to the largest increases. However, the increases for the largest consumers (I_5) have been limited to some extent as can be seen in the table in the annex.

In spite of this, tariff degression, i.e. the reduction in unit price between the extreme standard consumers (I_1 I_5) has been reduced to - 17 % in 1980, as opposed to - 25 % in 1978. If we consider prices within one tariff group (I_3 I_4 I_5), degression is only - 9 % in 1980, between I_3 and I_5, although I_5^4 consumes one hundred times as much annually as I_3.

As the tariffs do not contain any elements which depend on the regularity of offtake, modulation does not effect prices and thus prices for I_{3-1} and I_{3-2} are identical, as are prices for I_{4-1} and I_{4-2}.

It should be noted also, that a reduction of 0.75 cents/m^3, i.e. 22 cents/GJ is given in the three northern provinces close to the gas fields.

A comparison between the Gross Domestic Product (GDP) price index and the selling prices gives the following results:

1973 = 100

	GDP price index	Selling price I_1	I_2	I_3	I_4	I_5
1978	148.1	258	284	235	237	292
1979	154.5 *	316	350	283	283	329
1980	165 *	365	406	372	384	457

* provisional and estimated

In all cases, selling prices have increased by much more than prices for all goods and services (GDP) with several differences visible between the two types of tariff.

5. BELGIUM

a) Situation in the gas industry

The general structure of the gas industry has two levels:

- Import, transmission, supply to general distribution organizations and supply to large industrial consumers (> 33 500 GJ/year) by the company Distrigaz;
- general distribution (households and non-domestic consumers up to 33 500 GJ/year - and even up to 140 700 GJ/year by agreement with Distrigaz) by municipal undertakings, either individually or grouped together to form associations, with or without the participation of private companies, to manage operations.

The breakdown of natural gas deliveries is as follows:

	1977 %	1978 %	1979 %	standard consumer
Distrigaz direct sales to industry (of which 15% to power stations)	69	63	62	I_3 I_4 I_5
general distribution to households:				
heating tariffs	20	24	24	D_3 D_4
other tariffs	2	2	2	D_1 D_2
general distribution:				
non domestic uses	9	11	12	I_1 I_2
TOTAL for Belgium	100	100	100	

In 1978 there was:

- a decline in Distrigaz's direct sales, due to the economic recession and to competition from heavy fuel oils, the prices of which fell;
- an increase in sales to households as a result of favourable prices, a very harsh winter during 1978/1979 during 1978/1979 and, therefore, a considerable expansion in gas heating, the number of users of which went up from 900 000 at the beginning of 1978 to 1 million during 1979;
- an increase in sales to small industries, shops, public offices and services, due partly to a transfer of industrial customers from Distrigaz (transfer of approximately 4 000 TJ).

All the gas supplied is still natural gas, although there has been a change in the fields of origin:

	1978	1979
Slochteren (Netherlands)	87 %	83 %
North Sea (rich gas) (Norway)	13 %	17 %

b) Taxes

Sales of gas are subject to value added tax at the unchanged rate of 6 %. VAT is deductible in the case of industrial and commercial consumers.

Gas supplied by the public distribution network is subject to an indirect tax designed to benefit the communs in the form of dividends paid to them. This tax, which is difficult to isolate, is a component of the costs and is included in the prices net of tax given in this study.

c) Household prices - tariffs

The Supervisory Committee recommended the application of new indices for the adjustment of general gas distribution tariffs from 1st April 1979. The former index Ig is divided into two parts, viz.:

$Iga = \frac{Pfn}{Pfo}$ which reflects the change in the frontier price of natural gas (1)

$Igd = 0.70 + 0.30 \frac{S}{So}$ which reflects the change in the average monthly wage of workers in the private gas and electricity industry.

Iga applies only to the first part of the commodity rate in the tariffs (the part representing the purchase price).

Igd applies to the rest of the commodity rate and to the standing charges.

The first quarter of 1979 forms the transition period and provides a link between the two index systems, so that the level of the old index Ig corresponds to the base value of 1 for the new indices Iga and Igd.

The values of these indices are as follows:

	Ig	Iga	Igd
First quarter of 1979	195,57	1	1
First quarter of 1980	-	1.3732	1.0152

(1) The formula was slightly modified from 1st January 1980, to take account of transport costs.

Following the introduction of these new indices, the tariffs applicable in 1979 and 1980 are as follows:

Standard consumer	Tariff	Standing charge BFR/year	Commodity rate centimes/MF
D_1 D_2	A	422.40 x Igd	- 1st block (1) Brussels 5.9524 Iga + 25.7581 Igd Liège 5.9524 Iga + 25.4785 Igd Anvers 5.9524 Iga + 25.8676 Igd - Remainder 5.9524 Iga + 16.4070 Igd
D_3	B	2718 x Igd	5.9524 Iga + 7.2670 Igd
D_4	C	n x 1668 x Igd	5.9524 Iga + 4.3739 Igd

N = number of dwellings, minimum 10
(1) Size of first block:

Brussels, Liège = 15 474 MJ/year
Anvers = 17 936 MJ/year

d) Household prices - analysis

The results are given in Tables n° 21 and 22 in the annex.

For the smallest standard consumers D_1 and D_2, prices still vary according to location. However, the difference in price is not very large, of the order of 1 % for D_1 and 3 % for D_2.

Prices for all domestic consumers followed the same trend i.e. small increases during 1978 followed by larger increases during 1979. The overall increases between January 1978 and January 1980 ranged from 8 % to 21%, the percentage increasing as consumption rises. The main reason for these increases was a sharp increase in the price of imported natural gas during 1979 (+ 37 %). Tariff degression in Belgium is quite large, although it has decreased slightly during the reference period. For example in Brussels in January 1978 D_1 paid more than 3 times as much as D_4 per GJ of gas, whereas in January 1980 this figure was reduced to 2.8.

A comparison may be made between consumer selling prices, average income and the price index of gross domestic product (GDP).

1973 = 100

	GDP Index	Average income: distribution	Selling prices (Brussels) D_1	D_2	D_3	D_{3b}	D_4
1978	151.8	133.6	146.8	143.7	143.0	156.3	176.0
1979	159.2 *	135.2	148.2	145.1	144.4	158.3	178.0
1980	169.9 *	.	159.0	156.5	165.0	182.5	212.4

* estimated and provisional

In Belgium, the most typical consumer has gas central heating (D_3, D_{3b}). Prices for such consumers developed at more or less the same rate as the GDP. This is because the tariffs are indexed and reflect closely the changes in the cost of living. Therefore changes in the tariffs have only compensated for monetary depreciation and the price of gas is almost unchanged in constant terms.

However, small consumer have been treated lightly for social reasons, to the disadvantage of users of collective central heating for whom prices in real terms have increased slightly.

On the other hand, the average receipts of the distribution companies for domestic tariffs have increased by less than selling prices and the GDP. This can be explained by the constant increase in the average consumption per customer (the effect of tariff degression) particularly during the hard winter 1978-79.

e) Industrial prices - tariffs

Non-domestic consumers who take less than 33 500 GJ (*) per year (I_1 I_2) are supplied by the general distribution organizations. Their tariffs are linked to the same system of indexing (Iga and Igd) as for household uses (see above). The tariffs applicable as from 1979 and valid for the whole country are as follows:

Standard consumer	Tariff	Standing charge BFR/year	Commodity rate centimes/MJ	
I_1(3)	35-879 GJ/year	(1) 6497 x Igd	Load factor	
		(2) 5500 x Igd	$\geqslant$ 115 days	5.9524 Iga + 6.6695 Igd
			$<$ 115 days	5.9524 Iga + 8.1677 Igd
-	879-3517 GJ/year	6479 Igd	March-Nov.	5.9524 Iga + 4.9837 Igd
			Dec.-Feb.	5.9524 Iga + 8.1343 Igd
I_2	$>$ 3517 GJ/year	46401 Igd + 4.003 Igd/MJ(4)		5.9524 Iga + 2.2046 Igd

(1) January 1979
(2) January 1980
(3) Standard consumer I_1 is regarded as having a load factor of more than 115 days.
(4) per Megajoule of daily maximum offtake.

(*) By mutual agreement this limit was raised to 140 700 GJ/year

Industrial consumers who take more than 33 500 GJ a year (I_3 I_4 I_5) are supplied directly by Distrigaz. The tariff structure which came into effect in July 1976 still applies. It may be summarized as follows:

K (standing charge + commodity rate) + connection charge.

Standing charge: $(1 - Rh)\ 4371 \times R_{DZ} \times Sn$ BFR/month
Commodity rate : $[57.76 + 1.02\ (G-43.21) + 6\ R_{DZ} \times Cne]P$ BFR/GJ
Connection charge = $(0.27)\ R_{DZ}$ BFR/GJ

K is a reduction coefficient based on the monthly offtake:

- first 41 870 GJ	K = 1
- next 41 870 GJ	K = 0.99
- next 41 870 GJ	K = 0.98
- next 41 870 GJ	K = 0.97
- next 41 870 GJ	K = 0.96
- remainder	K = 0.95

This reduction coefficient applies only to the largest standard consumer, I_5, for which a weighted K was calculated.

G and R_{DZ} are indices based on costs.

	January 1978	January 1979	January 1980
G =	58.03	57.44	79.2
R_{DZ} =	1.081898	1.104759	1.146352

Sn: sum of "firm and "interruptible" subscriptions ($Sn_F + Sn_E$)

In the present study

$$Sn = Sn_F = \frac{\text{annual consumption}}{\text{hourly modulation h}}$$

Rh: coefficient of hourly regularity assessed on annual consumption (Qa) and the sum of subscriptions (Sn)

$$Rh = \frac{Qa}{8\ 760 \times Sn}$$

Cne: coefficient of non-interruptibility ranging between 0 and 1 according to the degree of interruptibility of supplies

$$Cne = \frac{Sn_F}{Sn}$$

As this study does not cover interruptible supplies, Cne = 1.

P: coefficient which adjusts the commodity rate according to the use made of the gas.

P can have three values, namely:
1.1 1 or 0.9

This study shows the three alternative prices calculated on the above basis. (For further details see: Gas prices 1976-1978- EUROSTAT, published 1979).

f) Industrial prices - analysis

The results are given in Tables n°. 23 and 24 in the annex.

All non-domestic tariffs are standardized throughout the whole of the country. Although there are two district tariff systems, prices follow the same trends, i.e. small decreases between January 1978 and January 1979 followed by large increases between 1979 and 1980. These increases ranged from 15 % to 28 %, with the largest consumers bearing the largest increases. The main factor influencing prices during this period was the cost of gas imported from the Netherlands. The relative difference in price between I_1 and I_5 is less in 1980, at - 39 %, than in 1978 when it was - 45 %. However this price difference is influenced by more than just volume. Variations in the load factor or modulation have a greater effect on prices than volume of consumption.

Thus, the unit price is reduced by 17 % when the modulation increases from 1600 hours to 4000 hours (I_{3-1} and I_{3-2}) even though the annual consumption remains the same.

Another peculiarity of the tariff system: standard consumers I_{3-2} and I_{4-1}, who have the same modulation, pay the same unit price, although one consumes ten times more than the other. The two consumers fall into the same consumption block (see section e).

Customers supplied by DISTRIGAZ have a coefficient of adjustment, based on the use of the gas, applied to their prices. This results in three price levels for each standard consumer, which gives price variations of ± 8 to 10 %. The average value of this coefficient is close to P = 1.

To conclude this analysis, a comparison may be made between the indices of selling prices, average income and the price index of gross domestic product (GDP):

1973 = 100

	GDP index	Average income from distribution (1)	Average income DISTRIGAZ (2)	Index of selling prices					
				I_1	I_2	I_{3-1}	I_{4-1}	I_{4-2}	I_5
1978	151.8	165.7	309	159	194	203	323	356	388
1979	159.2*	173.1	355	158	196	203	323	354	385
1980	169.9*	.	.	181	235	247	407	454	493

* estimated and provisional
(1) sales by distribution companies to non domestic consumers (I_1 I_2)
(2) direct sales by DISTRIGAZ to industry (I_3 I_4 I_5) including power stations.

With the exception of the smallest industrial consumers (I_1), gas prices increased by more than prices for the whole of goods and services, as represented by the GDP index. Therefore gas is now more expensive in real terms as well as current terms.
The average receipts follow the same pattern as selling prices as the structure of consumption has remained the same and the average consumption per customer has varied little, with a few fluctuations in 1978 and 1979. This is explained by the competitivity of fuel oil which replaced gas to some extent in 1978. However gas regained its position in 1979.

6. G.D. LUXEMBOURG

a) Situation in the gas industry

All natural gas is imported from the Netherlands, via Belgium (86 %) and France (14 %) by a single company (SOTEG) which transports and sells gas either to the public distribution companies or directly to large industrial consumers with an annual consumption of more than 2 million m3.

Gas ales are made up as follows:

21 % by the public distribution companies
79 % direct sales to industry by SOTEG, mainly to the iron and steel industry.

An agreement between the public distribution companies and the iron and steel industry states that the latter will reduce its consumption of natural gas during winter peak periods by up to a maximum of 25 % of its hourly and daily offtake, so as to allow the distribution companies to supply their peaks in demand. On the other hand it is possible for the iron and steel industry to take advantage of reductions in the public distributions consumption, during other periods of the year. This results in a good modulation in the flow of natural gas in the network, which allows the distribution companies to offer particularly favorable terms of sale to their clients.

b) Taxes

Gas is subject to value added tax (VAT) at a rate of 5 % of the price without tax. This tax is deductible for industrial and commercial consumers.

c) Household prices-tariffs

Gas tariffs were modified with effect from 1 July 1978 by a decree of the "Conseil Communal".

These tariffs are adjusted every six months to the economic situation by applying the indices set out below, redefined as follows:

$$E_1 = 0.23 \frac{I}{Io} + 0.6 \frac{P}{Po} + 0.17$$

$$E_2 = (P - Po) \times 1.1$$

where I = cost of living index
P = purchase price of natural gas (with Po = 2.0963 on 31 December 1977).

The values of these indices are given below:

	1st half of 1979	1st half of 1980
E_1	1.099 807	1.125 112
E_2	0.355 680	0.402 410

The tariffs are revised every six months;however, if the gas purchase price changes as a result of a change in calorific value, the tariff will be adjusted from the month of delivery of the gas with the new calorific value.

The tariffs in force as from 1 July 1978 are as follows:

Standard consumer	Tariff	Monthly meter charge in LFR	Monthly standing charge in LFR	Price per m^3 in LFR
D_1	TG 1	19	33 x E_1	10.74 + E_2
D_2	TG 2	19	110 x E_1	8.08 + E_2
D_3 D_{3b}	TMC 1	19	31 x E_1 (1) + 79 x N x E_1	3.64 + E_2
-	TMC 2		16 x E_1 (1) + 79 x N x E_1	3.64 + E_2
-	TC 1		31 x E_1 (1)	3.64 + E_2
D_4	TC 2	85	16 x E_1 (1)	3.64 + E_2

(1) per whole block of 5 000 Kcal/hour (21 000 kJ/h) of installed useful output
N = number of households (N $\geq$ 10 for TMC 2)
Gross calorific value of 1 m^3 = 36 000 kJ (8 600 Kcal).

It should be noted that the quality of the gas has changed since the last survey (giving the situation at the beginning of 1978), the gross calorific value having increased from 8 400 to 8 600 Kcal per m^3(from 35 200 to 36 000 kJ/m^3).

The meter charge varies according to the size of the meter, which itself is determined by the consumers maximum offtake of gas.

The blocks of installed useful output also depend on the consumer's maximum offtake of gas. For the purposes of this study, the following were considered:

3 blocks for D_3
4 blocks for D_{3b}
30 blocks for D_4.

These differing tariffs are applied as follows:

TG 1 : general basic tariff for domestic, commercial or professional uses, applied automatically if the consumer does not opt for another tariff. This tariff is advantageous for the smallest consumers only.

TG 2 : General tariff with subscription for a whole year for domestic, commercial or professional uses. This tariff is more advantageous for an annual consumption of over 13 GJ.

TMC 1: Tariff with annual subscription for gas used for household purposes and to supply heating equipment, either individual or collective, provided the latter serves less than ten apartments in the same building.

TMC 2: Tariff with annual subscription for gas used for household purposes and to supply collective heating equipment serving at least ten apartments in the same building.

TC 1 : Tariff with annual subscription for consumption used solely for heating purposes.

TC 2 : Similar to tariff TC 1, but for equipment with a useful output of 150 000 Kcal/h and over (630 000 kJ/h).

Reductions of a social nature are granted on the standing charges and on the commodity rates under tariffs TG 1 and TG 2, as follows:

30 % for households with three dependent children
40 % for households with four dependent children and
50 % for households with five or more dependent children.

(New rates as from January 1980).

d) Household prices - analysis

The results are given in Table n° 22 in the annex.

Between 1978 and 1980 domestic prices have risen by between 6 % and 9 % which is about half the rate of increase of the previous two years, 1976-1978.

The indexing system and the tariffs were changed during 1978, and it was probably this as much as anything else which led to price increases during 1978 being larger than during 1979.

The reduction in unit price for volume of consumption has not changed significantly during the reference period, it is still very large, as D_1 pays three times more than D_4 per unit of gas.

A comparison of the development of selling prices with the price index of Gross Domestic Product (GDP) permits a number of further comments.

1973 = 100

	GDP Index	Index of selling prices D_1	D_2	D_3	D_4
1978	140.9	154	148	214	234
1979	149.1*	163	157	231	248
1980	159.4*	164	158	234	251

* estimated and provisional

In all cases, gas prices increased by more than prices for all goods and services, characterised by the GDP price index. Thus gas prices increased not only in current terms but also in real terms (constant currency).

e) Industrial prices - tariffs

Gas tariffs were modified with effect from 1 July 1978 by a decree of the "Conseil Communal". This resulted in the new tariffs set out below, applicable to the industrial uses covered by this study:

Standard consumer	Tariff	Monthly meter charge in LFR	Subscription standing charge (monthly) in LFR	Monthly standing charge, in LFR, per m^3 of maximum offtake hourly	daily	Commodity charge per m^3 in LFR
I_1	Ti	85	31 x E_1 (1)	-	-	3.64 + E_2
I_2	TS 1	-	2500	48.552 x E_1	5.069 x E_1	2.401 + E_2
-	TS 2	-	5000	46.684 x E_1	4.882 x E_1	2.304 + E_2
I_{3-1} I_{3-2}	TS 3	-	8000	44.817 x E_1	4.685 x E_1	2.207 + E_2

(1) per whole block of 5 000 Kcal/h (21 000 kJ/h) of installed useful output.

The indices E_1 and E_2 are the same as for household uses (see above).

Gross calorific value of one m^3 = 36 000 kJ (8 600 Kcal).

For standard consumer I_1, the blocks of installed useful output depend on the maximum gas offtake. In this study, 12 blocks were taken for this consumer.

The special tariffs (TS 1, 2, 3) do not have a meter charge but an annual subscription amounting to 10 % of the actual cost of delivery, payable in twelve monthly instalments. "Delivery" includes the provision of meters and the pressure reducer, maintenance, annual overhaul and related wage costs.

The monthly subscriptions shown in the table are calculated from the normal average bills charged to subscribers who correspond to the standard consumers covered by this study.

These various tariffs apply as follows:

Ti : consumption intended for use in industry, craft trades or shops, with an annual offtake of more than 1 000 m^3 (> 36 GJ, > 8 600 000 Kcal).

TS 1 : annual consumption of between 100 000 and 499 999 m^3.

TS 2 : annual consumption of between 500 000 and 999 999 m^3.

TS 3 : annual consumption of 1 million m^3 and over.

All these tariffs require subscription for a whole year.

f) Industrial prices - analysis

The results are given in Table n°. 24 in the annex.

Prices are given only for I_1 to I_{3-2} as there are only a few industries with a consumption greater than I_{3-2} and these are supplied directly by SOTEG. Prices for 1978 have been recalculated and modified slightly.

Between 1978 and 1980 prices for industrial consumers rose by between 9 % and 16 %, the largest increases being for the largest consumers. These increases came from adjustments in the purchase price of natural gas at the border (+ 12 % approx. between the end of 1977 and the end of 1979).

The difference in unit price between I_1 and I_{3-2} has been reduced slightly during the reference period: - 36% in 1978 and - 32 % in 1980. This reduction depends not only on the volume consumed but also on the modulation.

It is interesting to note that with the same annual consumption a reduction in price of around 10 % may be obtained by improving modulation from 1600 hours to 4 000 hours (example I_{3-1} I_{3-2}).

A comparison with the GDP price index shows that prices for industrial consumers rose by more than prices of all goods and services.

1973 = 100

	GDP price index	Selling price I_1	I_2	I_{3-1}	I_{3-2}
1978	140.9	224	230	240	239
1979	149.1 *	241	261	271	273
1980	159.4 *	244	265	277	277

* estimated

7. UNITED KINGDOM

a) Situation in the gas industry

This study relates only to Great Britain, as the gas industry in Ulster is organised on a separate basis.

Most of the natural gas distributed in Great Britain comes from the North Sea (in 1979 81.2 % from British fields and 17.5 % from Norwegian fields). The remainder is imported as LNG from Algeria.

British Gas' sales may be broken down as follows:

	Number of consumers 1 000 m	Sales %	Standard consumers
Domestic sales:			
(Prepayment tariff	2 536	2.9	D_1
(Credit tariff	11 427	43.0	D_2 D_{2b} D_3 D_{3b} D_4
Commercial sales:	453	10.1	} I_1 I_2 I_3 I_4 I_5
Industrial sales:	70	42.6	
National and Local Government:	30	1.4	
TOTAL	14 516	100	

Previously all changes in tariffs had to be approved by the Price Commission. However this Commission was disbanded during 1979 and tariffs are now the responsibility of the British Gas Corporation within the framework of financial targets laid down by Government.

b) Taxes

There are no taxes levied directly on gas sales.

c) Household prices-tariffs

There are now only three gas tariff zones in Great Britain; i.e. the General Zone, represented in this study by London (= Glasgow and Cardiff), the Northern zone, represented by Leeds, and the Midlands represented by Birmingham.

Each zone has two tariffs on offer to domestic consumers: the Domestic Credit tariff and the Prepayment tariff.

The Domestic Credit tariff is made up as follows:

1) a standing charge per quarter, which the consumer has to pay, irrespective of consumption;

2) a higher commodity rate for the first 52 therms (5.5 GJ) per quarter; and

3) a lower follow-on rate for additional consumption.

The standing charge and the first commodity rate vary from one zone to another. The follow-on rate is the same for all regions.

Domestic Credit Tariff for the General Zone, January1980:

standing charge per quarter	UKL 2.16
commodity rate:	
First 52 therms per quarter	- 24.6 p/therm
Additional therms	- 16.5 p/therm

The prepayment tariff, where customers insert coins directly into a meter, is cheaper only for small consumers using less than about 27-33 therms per quarter (approximately 3.4 GJ). The prepayment tariff is used by 18 % of domestic customers but accounts for only 6 % of total domestic sales.

Prepayment Tariff for the General Zone, January 1980:

First 39 therms per quarter	- 31.7 p/therm
additional therms	- 24.6 p/therm

Block central heating by gas remains rare in Great Britain and no special tariffs exist. For consumptions of this size gas is normally supplied on the basis of an aggregated domestic credit tariff, and prices for D_4 have been calculated accordingly.

d) Household Prices-analysis

The results are given in Tables n° 25 and 26 in the annex.

Since April 1977 prices in Cardiff and Glasgow have been the same as in London because Scotland and Wales are now included in the General Zone. Therefore prices are given only for London, Leeds and Birmingham, representing each of the three tariff zones.

There were no changes in the domestic tariffs between April 1977 and June 1979. Following the completion of a report by the Price Commission the Secretary of State for Energy allowed British Gas to increase its domestic tariffs in June 1979 by 8 %. (On 1st April 1980 tariffs were further increased by around 17 %). Therefore the relative price differences between D_1 and D_{3b} (- 41 % for London, -36 % for Birmingham and - 30 % for Leeds) are generally the same as in 1978.

There has also been little change in the regional price differences, with London (the most expensive) being more than 20 % dearer than Birmingham (the cheapest), for the small standard consumers D_1 and D_2. For the larger standard consumers the differences are much less, for example D_3 is only 7 % more expensive in London than in Birmingham.

To conclude, a comparison may be made between the selling price of gas, the implied gross domestic product (GDP) price index and the average receipts of British Gas.

1973 = 100

	GDP price index	Average receipts	Selling price - London D_1	D_2	D_{2b}	D_3	D_{3b}
1978	210.2	165	153	168	171	187	196
1979	239.8 (1)	166 (1)	153	168	171	187	196
1980	291.6 (1)	.	165	180	183	201	211

(1) estimated and provisional

The average receipts correspond to the domestic tariffs applied in Great Britain for the financial year (i.e. from 1st April to 31st March) which includes the beginning of the year in question. Standard consumer D_4 is not shown, as it is little importance.

It is immediately obvious that the price of gas has increased by less than the GDP price index. In other words, the changes in the tariffs over the year have not made up for the reduction in the purchasing power of the pound and gas has become relatively cheaper compared with all goods and services i.e. in real terms (constant currency) prices for gas for domestic uses have decreased.

e) Industrial prices-tariffs

There is one tariff available in each zone for non-domestic consumers, industrial and commercial, with an annual consumption of less than 100 000 therms (< 10 500 GJ) i.e. I_1 and I_2. This tariff is almost identical in each of the three zones, the only difference being a slightly smaller standing charge in the Northern and Midlands zones.

Non-Domestic Tariff for the General Zone, January 1980:

standing charge per quarter	UKL 5.00	
commodity rate	24	p/therm.

The larger industrial and commercial consumers (I_3 I_4 I_5) are supplied under special contracts negociated individually. These contract prices are mainly influenced by the specific conditions of each customer and by other factors, the most important of which is the nature of the supply, i.e. firm or interruptible.

The prices given in this study are estimated "market related" prices which would be applied to new contracts. However, at the moment virtually no new industrial gas contracts are being offered.

For standard consumers I_3 and I_4 (firm contracts) these reference prices are related to gas oil prices, often with a premium of 10-15 % added, although the cost of converting old equipment to gas is taken into account.

Although gas may be supplied on a firm contract at any level of consumption, interruptible contracts are more common for larger industrial consumers (I_5) normally using gas for steam raising. These prices are related to those of heavy fuel oil with allowance being made for the fact that the consumer must keep available an alternative energy source. Interruptible contracts represent around one fifth of British Gas' sales.

These reference prices act as guidelines for new and renewed contracts, but, in practice, actual prices are below these levels for various reasons. In particular, there are lags in the adjustment of existing contracts, which are renewed annually, at prices fixed for one year, at a time of repidly rising oil prices, such as was experienced during 1979.

Because these prices are related to oil prices which vary little from one location to another, industrial gas prices do not vary much, geographically.

f) Industrial prices - analysis

The results are presented in Tables n° 27 and 28 in the annex.

Analysis is not easy, because of the way prices are arrived at. To avoid confusion, three categories may be distinguished.

- the tariff customers (I_1 I_2)
- firm contract customers (I_3 I_4)
- interruptible contract customers (I_5).

Small industrial and commercial consumers (I_1 and I_2), whose tariffs were unchanged between April 1977 and April 1979, were subjected to smaller price increases than the others (around 30 %). This results in a distortion with prices for contract customers which more or less followed the evolution in oil prices.

In effect, between 1978 and 1980 contract customers were subjected to price increases of the order of 70 % for firm contracts (I_3 I_4) and 55 % for interruptible contracts (I_5).

In all cases the year 1978 and the beginning of 1979 was a calm period, with prices levelling off, only to increase again dramatically during the second half of 1979.

The price levels given in this study for contract customers (I_3 I_4 I_5) are, in fact, guidelines only. Actual prices are below these levels, depending on the terms of the renewed contracts.

To give an idea of the dispersion of prices the following comparative table has been drawn up:

UKL/GJ

Quarter		Average receipts (1)	Average price for large consumers (2)	New and renewed contracts (3)	Tariff (4) I_1	Tariff (4) I_2	New contracts I_3	New contracts I_4	New contracts I_5
1978	1	0.92	1.05	1.45	1.76	1.70	1.65	1.43	1.22
	2		1.11	1.44					
	3		1.13	1.45					
	4		1.14	1.45					
1979	1	1.13	1.21	1.46	1.76	1.70	1.77	1.53	1.22
	2		1.20	1.50					
	3		1.29	1.78					
	4.		1.47	2.02					
1980	1	.	.	.	2.32	2.28	2.83	2.45	1.89

(1) Average receipts of British Gas from industrial sales, in the financial year ending 31 March, in the year indicated.

(2) Average price paid by large industrial consumers, based on a Department of Energy enquiry involving 800 industrial consumers.

(3) British Gas estimated average prices for new and renewed industrial and commercial contracts, firm and interruptible.

(4) Tariffs applied in London and the General Zone.

Interpretation of this table is not easy as the first three columns are influenced by the low prices of old and/or renewed contracts.

To complete this analysis, a comparison may be attempted between gas price indices, average receipts and the Gross Domestic Product (GDP) price index.

1973 = 100

	GDP price index	Average receipts (1)	Selling price: Tariffs (2) I_1	Tariffs (2) I_2	New contracts I_3	New contracts I_4	New contracts I_5
1978	210.2	322	173	221	246	231	452
1979	239.8(3)	396	173	221	264	247	452
1980	292 (3)	.	227	296	422	395	700

(1) British Gas industrial customers, financial year 1st April to 31 March
(2) London and the General zone
(3) Provisional and estimated.

With the exception of small industrial and commercial consumers, gas prices rose by more than prices for the whole of goods and services, as represented by the GDP. In contrast to the situation for domestic customers, gas for industrial uses has become more expensive, not only in current terms, but also in real terms (constant currency).

It can also be seen that the average receipts have not envolved along the same lines as prices. They have increased at a slightly faster rate, due to the effect of the ending of old contracts at pre-crisis prices.

In spite of the substantial increases in gas prices, it remains competitively priced compared with other energy sources, in particular oil, to the extent that demand is great and at times difficult to satisfy.

8. IRELAND

a) Situation in the gas industry

The natural gas discovered off the coast of Cork has been coming on shore since August 1978, but is not yet available to the public at large. It is being used principally by the Electricity Supply Board and as chemical feedstock. The country therefore is still supplied by a dozen or so local and independent gasworks, which manufacture gas from naphtha imported from the United Kingdom. The most important of these is a private company "Alliance and Dublin Consumers Gas Co." which supplies the Dublin area and sells around 80 % of the gas consumed in the country. Prices quoted in this study were supplied by that company.

In Dublin, gas sales were broken down as follows in 1979:

Tariffs	Sales %	Customers 1 000 m	Average Consumption GJ/year	Standard Consumers
Prepayment	26	88.3	9.1	D_1 D_2
Ordinary Domestic	12	33.0	10.6	
Two Part Domestic	38	27.0	42.3	D_3 D_{3b}
Industrial	18	3.0	187.2	I_1 I_2
Two Part Commercial	6	0.5	407.8	
TOTAL	100	151.8	-	

b) Taxes

Since 1975 when VAT was removed, no taxes have been levied directly on sales of gas.

c) Household prices - tariffs

A particular charactaristic of the gas tariffs is the inclusion of government subsidies, so that the rates are presented at two levels:

gross: - which corresponds to production and distribution costs
net: - after deduction of the government subsidies.

Three tariffs are available for domestic consumers:

- Prepayment (with coin-operated meter) } D_1 D_2
- Ordinary Domestic
- Two Part Domestic D_3 D_{3b}

These tariffs may be summarized in the following table:

Tariff		Two-monthly standing charge	Commodity Rate p/therm gross	nett
Prepayment	1979	-	67.64	50.62
	1980	-	87.99	70.97
Ordinary Domestic	1979	-	66.23	49.53
	1980	-	86.58	69.88
Two Part Domestic	1979	IRL 3.29	49.90	37.20
	1980	IRL 3.29	65.89	53.19

1 therm = 0.1055 GJ

Obviously, it is the net rate which has been used to calculate prices paid by the consumer.

Collective central heating (D_4) does not exist in Ireland.

d) Household prices - analysis

The results are given in Table n°. 26 in the annex.

In February 1978 a reduction in the Government subsidy caused selling prices to increase by 10 - 12 %. A further increase of around 40 % was applied in September 1979. This was brought about principally by the rise in prices of petroleum products, from which the gas is made.

Tariff degression, i.e. the reduction in unit price resulting from increased consumption, is slight. The difference in price between D_1 and D_{3b} is -23 % which is slightly less than in 1978. This does not encourage large consumption.

A comparison between the selling price and the price index of the Gross Domestic Product (GDP) leads to the following results:

1973 = 100

	GDP	Selling price D_1	D_2	D_3	D_{3b}
1978	197.4	203	210	309	326
1979	222.9 *	223	231	348	368
1980	256 *	313	324	489	520

* provisional and estimated

It can be seen that gas prices tend to rise by more than prices for all goods and services, as represented by the GDP price index. However, the relative price increases for the smallest consumers have been partially restrained by government action (subsidies) for social reasons, these small consumers being the most common in Dublin.

e) Industrial prices - tariffs

Two tariffs are available to non-domestic customers:

- Industrial and Special Purposes tariff (I_1 I_2)
- Commercial Two-Part tariff.

As in the domestic tariffs, these tariffs include government subsidies.

The Industrial and Special Purposes tariff consists of a commodity rate only:

p/therm

	gross	nett
1979	63.59	49.09
1980	80.32	65.82

Successive rebates are applied to these prices par consumption block, the sizes of which are irregular:

two monthly consumption		nett rebate	
1st	32 therms	0.97	p/therm
next	47.5 "	1.05	"
next	79.3 "	1.18	"
next	8.1 "	1.58	"
next	467 "	2.14	"
next	33.3 "	2.39	"
next	2 500 "	2.51	"
next	3 167 "	2.60	"
next	9 500 "	2.67	"
next	9 500 "	2.71	"
next	15 835 "	2.76	"
remainder		2.84	"

(1 therm = 0.1055 GJ)

The two part Commercial tariff is made up as follows:

two monthly standing charge			Commodity Rate p/therm	
	Gross	Nett	Gross	Nett
1979	IRL 3.83	IRL 3.06	53.81	40.54
1980	IRL 3.83	IRL 3.06	70.54	57.27

The standing charge applies to a boiler of capacity 500 therms (53 GJ). A two monthly nett supplement of 59 p is charged for every 100 therms (10.5 GJ) in excess of this.

A rebate is applied to the commodity rate, according to consumption:

two monthly consumption	nett rebate
First 158 therms	—
next 475 therms	0.16 p/therm
rest	0.285 p/therm

Prices for the industrial standard consumers in this study were calculated using the Industrial tariff, which is the cheaper of the two.

f) Industrial prices - analysis

Results are given in table n°. 28 in the annex.

Only small standard consumers I_1 and I_2 can be considered as representative in the Dublin area, as the high price and the tariff system do not encourage larger industries to use gas.

Between January 1978 and January 1980 prices increased by around 67 %. Price trends have been the same as for domestic prices, for the same reasons. A brief comparison with the GDP price index shows that gas prices for industry have become much more expensive compared with all goods and serivces. Moreever the consumption of manufactured gas by industry is decreasing (- 20 % since 1973).

1973 = 100

	PIB	Selling price I_1	Selling price I_2
1978	197.4	274	288
1979	222.9	327	333
1980	256 *	461	480

* Provisional and estimated

9. DENMARK

a) Situation in the gas industry

The prices recorded relate to the Copenhagen gas works owned by KØBENHAVNS BELYSNINGSVAESEN , which is the largest in the country, with 256 000 customers including 1 500 industrial consumers. This company makes and distributes gas manufactured from refinery gas (36 %) and naphthas (64 %). Its volume of production accounts for approximately 70 % of the works gas produced in the whole country.

If the programme runs according to schedule, natural gas from the North Sea will not be distributed on the Danish market before 1981.

b) Taxes

On 2 October 1978 the rate of value added tax (VAT) was increased from 18 % to 20.25 % of the price net of VAT.

On 1 August 1979 a new consumption tax was introduced, at a rate of 20 øre per m^3 on piped gas and with a gross calorific value of less than 23 MJ/m^3, which is the case in this study. This tax is included in the basis of assessment of VAT.

Both VAT and the consumption tax are deductible in the case of industrial and commercial consumers.

c) Household prices - tariffs

The tariff structure introduced in March 1977 is still in force. It comprises a standard tariff and a heating tariff.

The standard tariff has three components: meter rental, commodity rate and surcharge for raw materials.

1) The annual meter rental remains unchanged since the last study:
   DKR 72/year for D_1 D_2 D_3
   DKR 180/year for D_4.

2) The commodity rate is degressive according to blocks of annual consumption

		1978	1979	1980	øre/m^3
1st block	12 000 m^3/year	53	53	59	
2nd block	108 000 m^3/year	33	33	35	
3rd block	600 000 m^3/year	26	26	28	
4th block	1 080 000 m^3/year	23	23	25	
	excess	18	18	20	

3) The raw materials surcharge is added to the commodity rate per m^3 and is calculated monthly on the basis of the cost of the products used to manufacture the gas (petroleum products in Copenhagen). As bills for domestic consumers are sent every quarter, the surcharge is the average of the preceding three months. At the beginning of each of the years under review, this surcharge was as follows:

1978	1979	1980	øre/m^3
34.7	47.0	68.6	

When the gas is used mainly for heating, a heating tariff is applied on request. It has four components:

1) a meter rental identical to that of the standard tariff;
2) a standing charge of DKR 180 a year (= 1978, 79, 80);
3) a single commodity rate per m^3 consumed:

1978	1979	1980	øre/m^3
26	26	29	

4) a raw materials surcharge identical to that of the standard tariff.

In Copenhagen the gas has an energy content of 16 745 kilojoules (approximately 4 000 kcal) per m^3.

d) Household prices - analysis

See table 19 in the annex for the results. Several important changes took place during the period 1978-1980.

Firstly, taxes have changed dramatically with an increase in the rate of VAT and the introduction of a new specific tax which is applied only to one part of the tariff and is therefore non-proportional. Thus the rate of taxation which was a uniform 18 % of the price before tax at the beginning of 1978, is now from 37 to 45 % depending on the standard consumer.

The ratio between the standing charges and the commodity rates has also been changed as the standing charges remain unchanged while the commodity rates have greatly increased, influenced greatly by the raw materials surcharge which doubled in two years. This leads to a significant change in the tariff curves.

1) increases of 40 to 60 % in the prices without tax, between the beginning of 1978 and 1980;
2) even larger increases, 62 to 97 % in the prices with all taxes included;
3) a sharp decrease in tariff degression, the reduction in unit price when passing from D_1 to D_4, which was - 40 % in 1978, fell to - 27 % in 1980;
4) the rates of increase rise as consumption rises; thus the change in degression;
5) an acceleration in the tendancy to rise, the rate doubling during 1979.

The level of prices and the tariff structure does not encourage consumption and in fact collective heating by gas remains rare. At the end of 1979 Copenhagen had only 42 appartment blocks equiped with gas collective heating with an average consumption of 600 GJ. The average consumption of domestic customers is in the region of 9 GJ par year. Therefore it is D_1 which is most representative of gas consumers in Denmark.

A comparison between selling prices and the Gross Domestic Product (GDP) price index gives the following results:

1973 = 100

	GDP price index	Selling price (Copenhagen) D_1	D_2	D_3	D_{3b}
1978	162.3	238	275	277	294
1979	174.3 *	271	317	335	357
1980	192 *	384	457	527	566

* estimated and provisional

In all cases selling prices for gas have increased by more than those for all goods and services, as represented by the GDP price index.

e) Industrial prices - tariffs

The tariff for industrial uses, which in fact applies to only fairly modest levels of consumption, is calculated from that for domestic consumers.

It has three components:

1) a meter rental, similar to that of the standard household tariff (DKR 180/year for I_1 and DKR 516/year for I_2);

2) a degressive commodity rate for blocks of consumption, identical to the standard household tariff;

3) a raw materials surcharge which is added to the commodity rate per m^3 and applied monthly, as industrial consumers are billed every month. Accordingly, in January in each of the years under review this surcharge amounted to:

1978	1979	1980	
33.6	43.5	68.6	øre/m^3

f) Industrial prices - analysis

The results are presented in table n° 20 in the annex.
Prices are given only for I_1 and I_2 as industrial consumers with higher consumptions are rare.

The trends in prices are similar to those for domestic, prices with increase of:

80 % for I_1 January 1978 - January 1980
93 % for I_2 January 1978 - January 1980

The reasons for the increases are the same as those already cited for households.

Similarly, gas prices to industry increased by much more than prices for all goods and services (GDP index). In these conditions it is normal to note a tendancy for consumption to decrease.

1973 = 100

	GDP Price index	Selling price (Copenhagen) I_1	I_2
1978	162.3	237	263
1979	174.3 *	273	310
1980	192 *	427	508

* provisional and estimated

VI. COMMUNITY COMPARISON AND CONCLUSIONS

The locations chosen for the Community comparison are capitals or those towns which are most important from a economic point of view, namely:

Düsseldorf	Rotterdam	London
Paris	Brussels	Dublin
Milan	Luxembourg	Copenhagen

The results are shown in tables 30-35 in the annex and are given first in current PPSs for the selling price inclusive and exclusive of all taxes, and then in "deflated" indices. These results merit a certain number of comments and conclusions.

a) An upward trend in selling prices

During the two years studied, selling prices were increased in all cases. The increases were most severe for the large consumers, and affected industry more than households. The increases were, in general, greater during 1979 than during 1978, when prices showed a tendancy to level off.

Between the beginning of 1978 and the beginning of 1980, the rates of increase in the principle locations were as follows:

- households	small consumers		large consumers
Copenhagen	62	to	97 %
Dublin	54	to	60 %
Paris	39	to	56 %
Milan	28	to	51 %
Rotterdam	22	to	43 %
Brussels	8	to	21 %
Frankfurt	8	to	12 %
Luxembourg	6	to	9 %
London	6	to	8 %
Düsseldorf		1 %	

- industry	small consumers		large consumers
Copenhagen	80	to	93 %
Paris	44	to	87 %
Milan	35	to	83 %
London	30	to	70 %
Dublin	67	to	68 %
Rotterdam	41	to	62 %
Düsseldorf	1	to	48 %
Brussels	15	to	28 %
Luxembourg	9	to	16 %

These widely varying rates of increase lead to notable changes in the ranking of the locations according to price.

The prices without tax follow the same trends, except for the Netherlands and Denmark, where the increases are 25 to 43 % and 51 to 58 % respectively for industry.

The reasons for these price rises are:

- increased production and distribution costs, linked with general inflation
- increased taxation in several countries
- the rocketing of prices for other fuels, particularly oil, which allows gas prices to be increased in line with costs while remaining competitive.

b) International comparison of price levels

From table n°. 30 in the annex, the following conclusions may be drawn for selling prices for households in 1980:

- the highest prices are always seen in Copenhagen, Dublin and Milan, because these places are supplied with manufactured gas, for which the production costs, being linked to petroleum products, are heavy.
- the lowest price levels are found in London and Rotterdam, because of their proximity to the natural gas fields.
- the prices applied in Luxembourg are low, particularly for heating, because of a very degressive tariff system and low taxation.
- prices in Milan for the smallest consumers have been held in check to a certain extent, for social reasons.

The prices without taxes (table 31 in the annex) on the whole confirms these conclusions. However, Rotterdam appears to be always cheaper than London for natural gas, and Copenhagen cheaper than Dublin for gasworks gas, whereas the inverse was true for prices including tax. Taxation therefore exercises a systematic influence on the comparative price levels.

For industry it is best to deal separately with the small consumers (I_1 I_2) for which the highest prices are noted in Copenhagen, Dublin and Milan, which are supplied with gasworks gas.

Only natural gas is delivered to the larger consumers (I_3 I_4) for which the ranking of prices was systematic in 1980. The ranking is, in descending order: London, Milan, Düsseldorf, Paris and at the bottom in disorder, Brussels, Rotterdam and Luxembourg. The particularly low prices for gas in Luxembourg, in spite of the distances it has to be transported, are because of the good modulation fo the network and low taxation. On the other hand, it ought to be pointed out that the prices for London are overestimated, being price limits, rather than actual prices.

c) Price dispersion within the Community

Selling prices for gas for households vary greatly througout the Community, with prices being tripled between the extreme locations. This dispersion of prices is due to:

1° the nature of the gas
2° the different tariff systems
3° taxation.

If only natural gas is considered, eliminating the effect of gasworks gas, the dispersion remains large, with prices doubling, on average, between the extremes. This dispersion is greatest for the small consumers and decreases as the volume of gas consumed increases. Thus, in 1980, for collective heating (D_4) the most expensive location is 60 % dearer than the cheapest.

Price dispersion is not only great, but it has also increased during the last two years. However it is less if one considers prices without tax.

For industry, it is necessary to treat small consumers (I_1 I_2) separately, as the price dispersion for these is very large, because of the effect of gasworks gas. In 1980 a ratio of 1 to 4 was noted for the locations at each extreme. As for larger consumers who are only supplied with natural gas, prices may double from one location to another for a similar standard consumption. This dispersion has increased slightly during the past two years, contrary to the previous trend.

The prices without tax show a dispersion of the same order as the selling prices, all taxes included.

d) Effect of taxation

The fiscal charges, to which gas sales are subjected, tended to become more onerous (increases in three countries) and to diverge more and more in the Community. In 1980 the rates vary from 0 to 45 % of the price without tax.

The main tax levied on sales of gas is value added tax, which is always proportional to the price. On top of that several countries levy specific taxes which are applied to the commodity rate in the tariff which means the rate of tax increases as the volume increases.

Fiscal charges on gas sales

% of price without tax

	1978	1980
FR Germany	12	13
France	17.6	17.6
Italy (households) (1)	16 - 37	16 - 37
Italy (industry)	14	14
Netherlands (2)	4 - 4.2	18 - 18.2
Belgium	6	6
Luxembourg	5	5
United Kingdom	-	-
Ireland	-	-
Denmark (3)	18	37.2 - 45

(1) see chapter on Italy, point b)
(2) see chapter on Netherlands, point b)
(3) see chapter on Denmark, point b)

e) Effect of degression

When one passes from a small consumption to a large one, the unit selling price decreases for various reasons. To express this degression the reduction in unit price between the two extreme standard consumers was quoted.

Price degression for households in 1980 (% D_4/D_1):

Luxembourg	- 69 %
Düsseldorf	- 64 %
Brussels	- 64 %
Paris	- 60 %
Rotterdam	- 40 %
Copenhagen	- 27 %
London	- 24 %
Milan	- 12 %

Price degression for industry in 1980 (% I_{4-2}/I_1):

Brussels	- 37 %
Paris	- 36 %
Düsseldorf	- 32 %
Milan	- 24 %
Rotterdam	- 12 %
London	+ 6 %

From this one can form an idea of the diversity of degression curves resulting from the tariffs in vigour.

For industry, the reduction in unit prices seen comes not only from the quantity consumed but also from the regularity of the offtake (modulation) and sometimes from the break in the tariff system between the small and large consumers. The figure for London results from the latter.

In order to isolate the reduction in price granted only for increases in consumption the effect of the modulation must be eliminated. This can be done by comparing prices for standard consumers I_{3-2} and I_{4-1}, who have the same modulation (250 days, 4 000 hours) and come under the same type of tariff, although one has an annual consumption ten times higher than the other. Thus in 1980 when consumption passes from 41 860 to 418 600 GJ/year, the reduction in unit price is:

United Kingdom	- 13 %
Paris	- 9 %
Rotterdam	- 3,5 %
Italy	- 2 %
Düsseldorf	- 1 %
Belgium	0 %

In all cases degression has been greatly reduced during the last two years. This is because the fixed charges have increased by a lot less than the commodity rates (and in particular the cost of the gas itself). This results in a change in the ratio of fixed charges to proportional charges in the tariff formulae. Indirectly, this reduction in tariff degression the economising of energy.

f) The effect of modulation

For deliveries to industry the regularity of offtake or modulation (see chapter II) often plays a part in the tariff formulae and influences the price levels. It is possible to present the reduction in unit price obtained in 1980 when the modulation improves:

	from 200 days 1 600 h to 250 days 4 000 h	from 250 days 4 000 h to 330 days 8 000 h
Düsseldorf	- 4 %	- 4 %
Paris	- 3 %	- 2,5 %
Italy	0 %	0 %
Rotterdam	0 %	0 %
Belgium	- 17 %	- 7 %
Luxembourg	- 9 %	-
United Kingdom	0 %	0 %

(calculated from the prices without tax for standard consumers I_3 and I_4)

g) Evolution of prices in real terms

If the latest price increases appear spectacular in current terms, the aspect is different when prices are calculated in real terms, i.e. after eliminating the effect of monetary devaluation. In fact, inflation has been running at such a high rate recently that the changes in the gas tariffs often only made up for the depreciation in the purchasing power of the currency.

An example of this is given in table 32 in the annex, which gives the results for households as indices, deflated by the prices for Total Domestic Uses (base year 1973 = 100). It seems that, in general, gas for the smallest consumers (D_1 D_2) is no more expensive now than in 1973, in real terms. In fact, in certain countries, notably the Netherlands, Belgium, Luxembourg and especially the United Kingdom, prices have fallen in real terms for these customers. One may conclude therefore that small consumers have been protected from the full effects of the energy crisis.

On the other hand, gas central heating of individual dwellings (D_3) has become more expensive in real terms everywhere except in the United Kingdom and Belgium. Collective central heating is also dearer now everywhere. Also in Copenhagen all consumers have seen prices increase in real terms.

Table 35 gives gas prices for industry as indices, deflated in the same way. The results are, however, totally different. With few exceptions, prices show increases in constant terms, the rises becoming greater as consumption increases. The smallest increases are found in the United Kingdom and in France. This indicates that in general industry bore the brunt of the effects of the energy crisis.

STATISTISCHER ANHANG

STATISTICAL ANNEX

ANNEXE STATISTIQUE

APPENDICE STATISTICA

TABELLEN – TABLES
TABLEAUX – TABELLE
1 – 35

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

BR DEUTSCHLAND

DM/GJ

	Januar	HAMBURG * Verkaufspreis Selling price	HAMBURG * Steuern Taxes	HAMBURG * Preis ohne Steuern Price without taxes	HANNOVER * Verkaufspreis Selling price	HANNOVER * Steuern Taxes	HANNOVER * Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	30,65	3,28	27,37	23,99	2,57	21,42	1978	D_{3b}
	1979	30,65	3,28	27,37	23,99	2,57	21,42	1979 8,37 GJ/an-anno	
	1980	30,93	3,56	27,37	24,87	2,86	22,01	1980	
D_2 16,74 GJ/Jahr-year	1978	24,14	2,59	21,55	21,62	2,32	19,30	1978	D_2
	1979	24,14	2,59	21,55	21,62	2,32	19,30	1979 16,74 GJ/an-anno	
	1980	24,35	2,80	21,55	22,85	2,63	20,22	1980	
D_3 83,7 GJ/Jahr-year	1978	14,31	1,53	12,78	10,95	1,17	9,78	1978	D_3
	1979	14,31	1,53	12,78	10,95	1,17	9,78	1979 83,7 GJ/an-anno	
	1980	15,71	1,81	13,90	11,48	1,32	10,16	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	13,99	1,50	12,49	10,07	1,08	8,99	1978	D_{3b}
	1979	13,99	1,50	12,49	10,07	1,08	8,99	1979 125,6 GJ/an-anno	
	1980	15,05	1,73	13,32	10,87	1,25	9,62	1980	
D_4 1047 GJ/Jahr-year	1978	10,15	1,09	9,06	9,81	1,05	8,76	1978	D_4
	1979	10,15	1,09	9,06	9,81	1,05	8,76	1979 1047 GJ/an-anno	
	1980	11,28	1,30	9,98	10,45	1,20	9,25	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gas naturel
Gas naturale

2

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

BR DEUTSCHLAND — DM/GJ

	Januar	DÜSSELDORF * Verkaufspreis Selling price	DÜSSELDORF * Steuern Taxes	DÜSSELDORF * Preis ohne Steuern Price without taxes	FRANKFURT/M. * Verkaufspreis Selling price	FRANKFURT/M. * Steuern Taxes	FRANKFURT/M. * Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	29,42	3,15	26,27	32,73	3,51	29,22	1978	D_1
	1979	29,42	3,15	26,27	32,73	3,51	29,22	1979 8,37 GJ/an-anno	
	1980	29,69	3,42	26,27	35,19	4,05	31,14	1980	
D_2 16,74 GJ/Jahr-year	1978	22,33	2,39	19,94	22,83	2,45	20,38	1978	D_2
	1979	22,33	2,39	19,94	22,83	2,45	20,38	1979 16,74 GJ/an-anno	
	1980	22,53	2,59	19,94	24,66	2,84	21,82	1980	
D_3 83,7 GJ/Jahr-year	1978	14,28	1,53	12,75	13,23	1,42	11,81	1978	D_3
	1979	14,28	1,53	12,75	13,23	1,42	11,81	1979 83,7 GJ/an-anno	
	1980	14,41	1,66	12,75	14,67	1,69	12,98	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	12,73	1,36	11,37	11,51	1,23	10,28	1978	D_{3b}
	1979	12,73	1,36	11,37	11,51	1,23	10,28	1979 125,6 GJ/an-anno	
	1980	12,85	1,48	11,37	12,75	1,47	11,28	1980	
D_4 1047 GJ/Jahr-year	1978	10,70	1,15	9,55	9,78	1,05	8,73	1978	D_4
	1979	10,70	1,15	9,55	9,78	1,05	8,73	1979 1047 GJ/an-anno	
	1980	10,79	1,24	9,55	10,99	1,26	9,73	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gas naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

BR DEUTSCHLAND

DM/GJ

	Januar	STUTTGART * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	"MÜNCHEN * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/ Jahr-year	1978	31,42	3,37	28,05	21,95	2,35	19,60	1978	D_{3b}
	1979	31,42	3,37	28,05	21,95	2,35	19,60	1979 8,37 GJ/ an-anno	
	1980	31,70	3,65	28,05	23,22	2,67	20,55	1980	
D_2 16,74 GJ/ Jahr-year	1978	25,65	2,75	22,90	18,09	1,94	16,15	1978	D_2
	1979	25,65	2,75	22,90	18,09	1,94	16,15	1979 16,74 GJ/ an-anno	
	1980	25,88	2,98	22,90	19,18	2,21	16,97	1980	
D_3 83,7 GJ/ Jahr-year	1978	14,86	1,59	13,27	11,70	1,25	10,45	1978	D_3
	1979	14,86	1,59	13,27	11,70	1,25	10,45	1979 83,7 GJ/ an-anno	
	1980	15,00	1,73	13,27	12,88	1,48	11,40	1980	
D_{3b} 125,6 GJ/ Jahr-year	1978	13,56	1,45	12,11	10,93	1,17	9,76	1978	D_{3b}
	1979	13,56	1,45	12,11	10,93	1,17	9,76	1979 125,6 GJ/ an-anno	
	1980	13,68	1,57	12,11	12,02	1,38	10,64	1980	
D_4 1047 GJ/ Jahr-year	1978	11,65	1,25	10,40	8,44	0,90	7,54	1978	D_4
	1979	11,65	1,25	10,40	9,83	1,05	8,78	1979 1047 GJ/ an-anno	
	1980	11,75	1,35	10,40	11,21	1,29	9,92	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gas naturel
Gas naturale

4

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

BR DEUTSCHLAND

DM/GJ

	Januar	HAMBURG * Verkaufspreis Selling price	HAMBURG * Steuern Taxes	HAMBURG * Preis ohne Steuern Price without taxes	HANNOVER * Verkaufspreis Selling price	HANNOVER * Steuern Taxes	HANNOVER * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	18,13	1,94	16,19	10,56	1,13	9,43	1978
	1979	18,13	1,94	16,19	10,56	1,13	9,43	1979
	1980	18,29	2,10	16,19	10,86	1,25	9,61	1980
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	9,76	1,05	8,71	7,87	0,84	7,03	1978
	1979	9,76	1,05	8,71	8,43	0,90	7,53	1979
	1980	10,87	1,25	9,62	8,97	1,03	7,94	1980
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	8,62	0,92	7,70	6,75	0,72	6,03	1978
	1979	8,47	0,91	7,56	7,60	0,81	6,79	1979
	1980	10,31	1,19	9,12	8,61	0,99	7,62	1980
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	8,10	0,87	7,23	5,94	0,64	5,30	1978
	1979	8,00	0,86	7,14	6,68	0,72	5,96	1979
	1980	9,11	1,05	8,06	8,60	0,99	7,61	1980
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	7,41	0,79	6,62	5,67	0,61	5,06	1978
	1979	7,31	0,78	6,53	6,41	0,69	5,72	1979
	1980	8,64	0,99	7,65	7,98	0,92	7,06	1980
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	7,01	0,75	6,26				1978
	1979	6,91	0,74	6,17				1979
	1980	8,42	0,97	7,45				1980
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978							1978
	1979							1979
	1980							1980
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

BR DEUTSCHLAND

DM/GJ

	Januar	DÜSSELDORF * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	FRANKFURT/M. * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/ Jahr-year	1978	14,45	1,55	12,90	10,45	1,12	9,33	1978 I_1
	1979	14,45	1,55	12,90	10,45	1,12	9,33	1979 418,6 GJ/
	1980	14,58	1,68	12,90	11,83	1,36	10,47	1980 an-anno
I_2 4186,0 GJ/ Jahr-year 200 Tage-days	1978	8,64	0,93	7,71	8,99	0,96	8,03	1978 I_2
	1979	8,64	0,93	7,71	8,99	0,96	8,03	1979 4186,0 GJ/
	1980	11,91	1,37	10,54	11,46	1,32	10,14	1980 an-anno
I_{3-1} 41860 GJ/ Jahr-year 200 Tage-days 1 600 h	1978	8,09	0,87	7,22	7,93	0,85	7,08	1978 I_{3-1}
	1979	8,09	0,87	7,22	7,93	0,85	7,08	1979 41860 GJ/
	1980	10,96	1,26	9,70	10,57	1,22	9,35	1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	7,72	0,83	6,89	7,72	0,83	6,89	1978 I_{3-2}
	1979	7,72	0,83	6,89	7,72	0,83	6,89	1979 41860 GJ/
	1980	10,51	1,21	9,30	10,25	1,18	9,07	1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	7,10	0,76	6,34	7,25	0,78	6,47	1978 I_{4-1}
	1979	7,68	0,82	6,86	7,25	0,78	6,47	1979 418600 GJ/
	1980	10,43	1,20	9,23	10,20	1,17	9,03	1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/ Jahr-year 330 Tage-days 8 000 h	1978	6,76	0,72	6,04	7,03	0,75	6,28	1978 I_{4-2}
	1979	7,35	0,79	6,56	7,03	0,75	6,28	1979 418600 GJ/
	1980	10,00	1,15	8,85	9,90	1,14	8,76	1980 an-anno 330 jours-giorni 8 000 h
I_5 4186000 GJ/ Jahr-year 330 Tage-days 8 000 h	1978							1978 I_5
	1979							1979 4186000 GJ/
	1980							1980 an-anno 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

BR DEUTSCHLAND — DM/GJ

		STUTTGART *			MÜNCHEN *			
	Januar	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	11,70	1,25	10,45	10,60	1,14	9,46	1978 I_1
	1979	11,73	1,26	10,47	10,60	1,14	9,46	1979 418,6 GJ/
	1980	11,83	1,36	10,47	11,35	1,31	10,04	1980 an-anno
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	11,73	1,26	10,47	9,31	1,00	8,31	1978 I_2
	1979	11,75	1,26	10,49	10,74	1,15	9,59	1979 4186,0 GJ/
	1980	12,92	1,49	11,43	12,25	1,41	10,84	1980 an-anno
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	11,65	1,25	10,40	9,31	1,00	8,31	1978 I_{3-1}
	1979	11,66	1,25	10,41	10,74	1,15	9,59	1979 41860 GJ/
	1980	12,84	1,48	11,36	12,25	1,41	10,84	1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	9,64	1,03	8,61	6,96	0,75	6,21	1978 I_{3-2}
	1979	9,65	1,03	8,62	8,03	0,86	7,17	1979 41860 GJ/
	1980	10,81	1,24	9,57	9,15	1,05	8,10	1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	9,63	1,03	8,60	6,52	0,70	5,82	1978 I_{4-1}
	1979	9,65	1,03	8,62	7,65	0,82	6,83	1979 418600 GJ/
	1980	10,80	1,24	9,56	8,32	0,96	7,36	1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	8,96	0,96	8,00	6,52	0,70	5,82	1978 I_{4-2}
	1979	8,98	0,96	8,02	7,65	0,82	6,83	1979 418600 GJ/
	1980	10,14	1,17	8,97	8,32	0,96	7,36	1980 an-anno 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h								I_5 4186000 GJ/ an-anno 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

FRANCE

FF/GJ

		LILLE *			REGION PARISIENNE *				
	Januar	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/ Jahr-year	1978				48,70	7,29	41,41	1978	D_{3b}
	1979	= Région Parisienne			53,59	8,02	45,57	1979	8,37 GJ/ an-anno
	1980				67,91	10,16	57,75	1980	
D_2 16,74 GJ/ Jahr-year	1978				41,02	6,14	34,88	1978	D_2
	1979	= Région Parisienne			45,15	6,76	38,39	1979	16,74 GJ/ an-anno
	1980				57,80	8,65	49,15	1980	
D_3 83,7 GJ/ Jahr-year	1978	24,83	3,72	21,11	25,67	3,84	21,83	1978	D_3
	1979	28,49	4,26	24,23	28,44	4,26	24,18	1979	83,7 GJ/ an-anno
	1980	38,14	5,71	32,43	38,14	5,71	32,43	1980	
D_{3b} 125,6 GJ/ Jahr-year	1978	21,64	3,24	18,40	22,18	3,32	18,86	1978	D_{3b}
	1979	24,84	3,72	21,12	24,78	3,71	21,07	1979	125,6 GJ/ an-anno
	1980	33,92	5,08	28,84	33,92	5,08	28,84	1980	
D_4 1047 GJ/ Jahr-year	1978	17,85	2,67	15,18	17,60	2,63	14,97	1978	D_4
	1979	19,57	2,93	16,64	19,33	2,89	16,44	1979	1047 GJ/ an-anno
	1980	27,53	4,12	23,41	27,53	4,12	23,41	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gas naturel
Gas naturale

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GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

FRANCE — FF/GJ

	Januar	STRASBOURG * Verkaufspreis Selling price	STRASBOURG * Steuern Taxes	STRASBOURG * Preis ohne Steuern Price without taxes	MARSEILLE * Verkaufspreis Selling price	MARSEILLE * Steuern Taxes	MARSEILLE * Preis ohne Steuern Price without taxes	Janvier
D_1 8,37 GJ/ Jahr-year	1978	68,96	10,32	58,64	= Région Parisienne			1978 D_1
	1979	75,89	11,36	64,53				1979 8,37 GJ/ an-anno
	1980	86,48	12,94	73,54				1980
D_2 16,74 GJ/ Jahr-year	1978	49,49	7,41	42,08	= Région Parisienne			1978 D_2
	1979	55,21	8,26	46,95				1979 16,74 GJ/ an-anno
	1980	63,68	9,53	54,15				1980
D_3 83,7 GJ/ Jahr-year	1978	27,47	4,11	23,36	26,04	3,90	22,14	1978 D_3
	1979	29,14	4,36	24,78	28,82	4,31	24,51	1979 83,7 GJ/ an-anno
	1980	34,46	5,16	29,30	38,14	5,71	32,43	1980
D_{3b} 125,6 GJ/ Jahr-year	1978	25,78	3,86	21,92	22,54	3,37	19,17	1978 D_{3b}
	1979	27,33	4,09	23,24	25,17	3,77	21,40	1979 125,6 GJ/ an-anno
	1980	32,48	4,86	27,62	33,92	5,08	28,84	1980
D_4 1047 GJ/ Jahr-year	1978	19,32	2,89	16,43	17,85	2,67	15,18	1978 D_4
	1979	21,65	3,24	18,41	19,57	2,93	16,64	1979 1047 GJ/ an-anno
	1980	27,04	4,05	22,99	27,53	4,12	23,41	1980
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

FRANCE

FF/GJ

	Januar	LYON * Verkaufspreis Selling price	LYON * Steuern Taxes	LYON * Preis ohne Steuern Price without taxes	TOULOUSE * Verkaufspreis Selling price	TOULOUSE * Steuern Taxes	TOULOUSE * Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/ Jahr-year	1978	= Région Parisienne			48,10	7,20	40,90	1978	D_{3b}
	1979				52,94	7,92	45,02	1979 8,37 GJ/ an-anno	
	1980				67,91	10,16	57,75	1980	
D_2 16,74 GJ/ Jahr-year	1978	= Région Parisienne			41,02	6,14	34,88	1978	D_2
	1979				44,49	6,66	37,83	1979 16,74 GJ/ an-anno	
	1980				57,80	8,65	49,15	1980	
D_3 83,7 GJ/ Jahr-year	1978	26,40	3,95	22,45	25,67	3,84	21,83	1978	D_3
	1979	29,19	4,37	24,82	28,44	4,26	24,18	1979 83,7 GJ/ an-anno	
	1980	38,14	5,71	32,43	38,14	5,71	32,43	1980	
D_{3b} 125,6 GJ/ Jahr-year	1978	22,91	3,43	19,48	22,18	3,32	18,86	1978	D_{3b}
	1979	25,52	3,82	21,70	24,78	3,71	21,07	1979 125,6 GJ/ an-anno	
	1980	33,92	5,08	28,84	33,92	5,08	28,84	1980	
D_4 1047 GJ/ Jahr-year	1978	18,08	2,71	15,37	17,60	2,63	14,97	1978	D_4
	1979	19,79	2,96	16,83	19,33	2,89	16,44	1979 1047 GJ/ an-anno	
	1980	27,53	4,12	23,41	27,53	4,12	23,41	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gas naturel
Gas naturale

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

FRANCE

FF/GJ

	Januar	LILLE * Verkaufspreis Selling price	LILLE * Steuern Taxes	LILLE * Preis ohne Steuern Price without taxes	REGION PARISIENNE * Verkaufspreis Selling price	REGION PARISIENNE * Steuern Taxes	REGION PARISIENNE * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	19,46	2,91	16,55	20,97	3,14	17,83	1978 I_1
	1979	21,80	3,26	18,54	21,58	3,23	18,35	1979 418,6 GJ/an-anno
	1980	30,16	4,51	25,65	30,16	4,51	25,65	1980
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	16,12	2,41	13,71	17,88	2,68	15,20	1978 I_2
	1979	18,47	2,76	15,71	18,24	2,73	15,51	1979 4186,0 GJ/an-anno
	1980	26,25	3,93	22,32	26,25	3,93	22,32	1980
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	14,83	2,22	12,61	14,94	2,24	12,70	1978 I_{3-1}
	1979	14,83	2,22	12,61	14,94	2,24	12,70	1979 41860 GJ/an-anno
	1980	22,45	3,36	19,09	22,52	3,37	19,15	1980 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	13,27	1,99	11,28	13,19	1,97	11,22	1978 I_{3-2}
	1979	13,27	1,99	11,28	13,19	1,97	11,22	1979 41860 GJ/an-anno
	1980	21,79	3,26	18,53	21,86	3,27	18,59	1980 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	11,35	1,70	9,65	11,03	1,65	9,38	1978 I_{4-1}
	1979	11,35	1,70	9,65	11,03	1,65	9,38	1979 418600 GJ/an-anno
	1980	19,76	2,96	16,80	19,91	2,98	16,93	1980 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	11,01	1,65	9,36	10,68	1,60	9,08	1978 I_{4-2}
	1979	11,01	1,65	9,36	10,68	1,60	9,08	1979 418600 GJ/an-anno
	1980	19,33	2,89	16,44	19,42	2,91	16,51	1980 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978	10,30	1,54	8,76	10,27	1,54	8,73	1978 I_5
	1979	10,30	1,54	8,76	10,27	1,54	8,73	1979 4186000 GJ/an-anno
	1980	19,13	2,86	16,27	19,22	2,88	16,34	1980 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

FRANCE

FF/GJ

		STRASBOURG *			MARSEILLE *			
	Januar	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	24,18	3,62	20,56	21,74	3,25	18,49	1978 I_1
	1979	27,11	4,06	23,05	21,80	3,26	18,54	1979 418,6 GJ/
	1980	32,99	4,94	28,05	30,16	4,51	25,65	1980 an-anno
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	20,38	3,05	17,33	17,33	2,59	14,74	1978 I_2
	1979	22,83	3,42	19,41	18,47	2,76	15,71	1979 4186,0 GJ/
	1980	27,47	4,11	23,36	26,25	3,93	22,32	1980 an-anno
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978				16,64	2,49	14,15	1978 I_{3-1}
	1979				16,64	2,49	14,15	1979 41860 GJ/
	1980				22,50	3,37	19,13	1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	15,93	2,38	13,55	13,50	2,02	11,48	1978 I_{3-2}
	1979	15,93	2,38	13,55	13,50	2,02	11,48	1979 41860 GJ/
	1980	20,12	3,01	17,12	21,84	3,27	18, 7	1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978				12,02	1,80	10,22	1978 I_{4-1}
	1979				12,02	1,80	10,22	1979 418600 GJ/
	1980				19,87	2,97	16,90	1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978				11,04	1,65	9,39	1978 I_{4-2}
	1979				11,04	1,65	9,39	1979 418600 GJ/
	1980				19,37	2,90	16,47	1980 an-anno 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978				10,61	1,59	9,02	1978 I_5
	1979				10,61	1,59	9,02	1979 4186000 GJ/
	1980				19,18	2,87	16,31	1980 an-anno 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

FRANCE — FF/GJ

	Januar	LYON * Verkaufspreis Selling price	LYON * Steuern Taxes	LYON * Preis ohne Steuern Price without taxes	TOULOUSE * Verkaufspreis Selling price	TOULOUSE * Steuern Taxes	TOULOUSE * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	19,77	2,96	16,81	18,36	2,75	15,61	1978 I_1
	1979	22,03	3,30	18,73	21,58	3,23	18,35	1979 418,6 GJ/an-anno
	1980	30,16	4,51	25,65	30,16	4,51	25,65	1980
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	18,35	2,75	15,60	15,81	2,37	13,44	1978 I_2
	1979	18,70	2,80	15,90	18,24	2,73	15,51	1979 4186,0 GJ/an-anno
	1980	26,25	3,93	22,32	26,25	3,93	22,32	1980
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	15,62	2,34	13,28	14,46	2,16	12,30	1978 I_{3-1}
	1979	15,62	2,34	13,28	14,46	2,16	12,30	1979 41860 GJ/an-anno
	1980	22,19	3,32	18,87	21,60	3,23	18,37	1980 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	13,11	1,96	11,15	13,63	2,04	11,59	1978 I_{3-2}
	1979	13,11	1,96	11,15	13,63	2,04	11,59	1979 41860 GJ/an-anno
	1980	21,58	3,23	18,35	20,64	3,09	17,55	1980 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	11,77	1,76	10,01	12,04	1,80	10,24	1978 I_{4-1}
	1979	11,77	1,76	10,01	12,10	1,81	10,29	1979 418600 GJ/an-anno
	1980	19,62	2,94	16,68	18,87	2,82	16,05	1980 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	10,85	1,62	9,23	10,68	1,60	9,08	1978 I_{4-2}
	1979	10,85	1,62	9,23	11,68	1,75	9,93	1979 418600 GJ/an-anno
	1980	19,17	2,87	16,30	18,38	2,75	15,63	1980 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978	10,42	1,56	8,86	10,57	1,58	8,99	1978 I_5
	1979	10,42	1,56	8,86	11,57	1,73	9,84	1979 4186000 GJ/an-anno
	1980	18,98	2,84	16,14	18,26	2,73	15,53	1980 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

ITALIA — LIT/GJ

	Januar	TORINO * Verkaufspreis Selling price	TORINO * Steuern Taxes	TORINO * Preis ohne Steuern Price without taxes	MILANO + Verkaufspreis Selling price	MILANO + Steuern Taxes	MILANO + Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	4 242	1 028	3 214	6 702	957	5 745	1978	D_{3b}
	1979	4 500	1 043	3 457	6 903	970	5 933	1979	8,37 GJ/an-anno
	1980	5 996	1 299	4 697	8 599	1 189	7 410	1980	
D_2 16,74 GJ/Jahr-year	1978	3 927	1 011	2 916	6 170	927	5 243	1978	D_2
	1979	4 164	1 024	3 140	6 371	939	5 432	1979	16,74 GJ/an-anno
	1980	5 661	1 280	4 381	8 068	1 159	6 909	1980	
D_3 83,7 GJ/Jahr-year	1978	3 704	998	2 706	5 196	872	4 324	1978	D_3
	1979	3 874	1 008	2 866	5 396	884	4 512	1979	83,7 GJ/an-anno
	1980	5 369	1 263	4 106	7 636	1 135	6 501	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	3 660	995	2 665	5 165	870	4 295	1978	D_{3b}
	1979	3 825	1 005	2 820	5 362	881	4 481	1979	125,6 GJ/an-anno
	1980	5 321	1 260	4 061	7 642	1 135	6 507	1980	
D_4 1047 GJ/Jahr-year	1978	3 703	997	2 706	4 994	860	4 134	1978	D_4
	1979	3 799	1 002	2 797	5 191	872	4 319	1979	1047 GJ/an-anno
	1980	5 293	1 257	4 036	7 547	1 129	6 418	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas
\+ Ortsgas
Gasworks gas

* Gas naturel
Gas naturale
\+ Gaz d'usines
Gas di offioina

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GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

ITALIA

LIT/GJ

		ROMA *			ROMA +				
Januar		Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	5 064	1 075	3 989	7 795	1 071	6 724	1978	D_1
	1979	4 504	1 043	3 461	6 637	1 006	5 631	1979	8,37 GJ/an-anno
	1980	6 763	1 342	5 421	9 471	1 303	8 168	1980	
D_2 16,74 GJ/Jahr-year	1978	5 139	1 079	4 060	8 345	1 102	7 243	1978	D_2
	1979	4 362	1 035	3 327	7 175	1 036	6 139	1979	16,74 GJ/an-anno
	1980	6 408	1 322	5 086	9 040	1 278	7 762	1980	
D_3 83,7 GJ/Jahr-year	1978	4 577	1 047	3 530	7 707	1 066	6 641	1978	D_3
	1979	3 864	1 007	2 857	6 132	977	5 155	1979	83,7 GJ/an-anno
	1980	6 177	1 309	4 868	8 756	1 262	7 494	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	4 537	1 045	3 492	7 682	1 065	6 617	1978	D_{3b}
	1979	3 816	1 004	2 812	6 089	975	5 114	1979	125,6 GJ/an-anno
	1980	6 130	1 306	4 824	8 704	1 259	7 445	1980	
D_4 1047 GJ/Jahr-year	1978	4 524	1 044	3 480	7 861	1 078	6 783	1978	D_4
	1979	3 790	1 002	2 788	6 189	947	5 242	1979	1047 GJ/an-anno
	1980	5 855	1 289	4 566	8 139	1 230	6 909	1980	
January		Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas
\+ Ortsgas
Gasworks gas

* Gas naturel
Gas naturale
\+ Gaz d'usines
Gas di officina

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

ITALIA

LIT/GJ

	Januar	GENOVA * Verkaufspreis Selling price	GENOVA * Steuern Taxes	GENOVA * Preis ohne Steuern Price without taxes	NAPOLI + Verkaufspreis Selling price	NAPOLI + Steuern Taxes	NAPOLI + Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	5 055	1 139	3 916	7 409	1 081	6 328	1978	D_{3b}
	1979	5 575	1 169	4 406	9 345	1 194	8 151	1979 8,37 GJ/an-anno	
	1980	7 193	1 445	5 748	10 812	1 429	9 383	1980	
D_2 16,74 GJ/Jahr-year	1978	4 270	1 095	3 175	7 335	1 077	6 258	1978	D_2
	1979	4 891	1 130	3 761	9 274	1 190	8 084	1979 16,74 GJ/an-anno	
	1980	6 509	1 406	5 103	10 743	1 426	9 317	1980	
D_3 83,7 GJ/Jahr-year	1978	3 668	1 061	2 607	3 826	878	2 948	1978	D_3
	1979	4 436	1 105	3 331	5 758	991	4 767	1979 83,7 GJ/an-anno	
	1980	6 055	1 381	4 674	7 227	1 227	6 000	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	3 600	1 057	2 543	3 603	865	2 738	1978	D_{3b}
	1979	4 505	1 108	3 397	5 556	980	4 576	1979 125,6 GJ/an-anno	
	1980	6 123	1 384	4 739	7 024	1 215	5 809	1980	
D_4 1047 GJ/Jahr-year	1978	3 473	1 049	2 424	3 189	842	2 347	1978	D_4
	1979	3 906	1 074	2 832	5 182	959	4 223	1979 1047 GJ/an-anno	
	1980	5 524	1 350	4 174	6 649	1 194	5 455	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas
\+ Ortsgas
Gasworks gas

* Gaz naturel
Gas naturale
\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

ITALIA

LIT/GJ

	Januar	TORINO * Verkaufspreis Selling price	TORINO * Steuern Taxes	TORINO * Preis ohne Steuern Price without taxes	MILANO + * Verkaufspreis Selling price	MILANO + * Steuern Taxes	MILANO + * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	3 356	412	2 944	5 447	669	4 778	1978 I_1
	1979	3 664	450	3 214	5 659	695	4 964	1979 418,6 GJ/an-anno
	1980	5 078	624	4 454	7 343	902	6 441	1980
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	3 278	403	2 875	4 840	594	4 246	1978 I_2
	1979	3 585	440	3 145	5 053	621	4 432	1979 4186,0 GJ/an-anno
	1980	4 999	614	4 385	7 321	899	6 422	1980
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	2 153	264	1 889				1978 I_{3-1}
	1979	2 193	269	1 924				1979 41860 GJ/an-anno
	1980	3 858	474	3 384				1980 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	2 153	264	1 889				1978 I_{3-2}
	1979	2 193	269	1 924				1979 41860 GJ/an-anno
	1980	3 858	474	3 384				1980 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	2 108	259	1 849				1978 I_{4-1}
	1979	2 147	264	1 883	= TORINO			1979 418600 GJ/an-anno
	1980	3 776	464	3 312				1980 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	2 108	259	1 849				1978 I_{4-2}
	1979	2 147	264	1 883				1979 418600 GJ/an-anno
	1980	3 776	464	3 312				1980 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978	2 038	250	1 788				1978 I_5
	1979	2 077	255	1 822				1979 4186000 GJ/an-anno
	1980	3 653	449	3 204				1980 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

\+ Ortsgas für I_1 I_2
Gasworks gas for I_1 I_2

* Gaz naturel
Gas naturale

\+ Gaz d'usines pour I_1, I_2
Gas di officina per I_1, I_2

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

ITALIA

LIT/GJ

	Januar	ROMA * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	ROMA + Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/ Jahr-year	1978	3 965	487	3 478	8 109	996	7 113	1978 I_1
	1979	3 125	384	2 741	6 340	779	5 561	1979 418,6 GJ/
	1980	6 134	753	5 381	9 350	1 148	8 202	1980 an-anno
I_2 4186,0 GJ/ Jahr-year 200 Tage-days	1978	3 886	477	3 409	7 717	948	6 769	1978 I_2
	1979	3 044	372	2 672	5 947	730	5 217	1979 4186,0 GJ/
	1980	6 056	744	5 312	8 958	1 100	7 858	1980 an-anno
I_{3-1} 41860 GJ/ Jahr-year 200 Tage-days 1 600 h	1978							1978 I_{3-1}
	1979							1979 41860 GJ/
	1980							1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/ Jahr-year 250 Tage-days 4 000 h	1978							1978 I_{3-2}
	1979							1979 41860 GJ/
	1980							1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	=	TORINO					1978 I_{4-1}
	1979							1979 418600 GJ/
	1980							1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/ Jahr-year 330 Tage-days 8 000 h	1978							1978 I_{4-2}
	1979							1979 418600 GJ/
	1980							1980 an-anno 330 jours-giorni 8 000 h
I_5 4186000 GJ/ Jahr-year 330 Tage-days 8 000 h	1978							1978 I_5
	1979							1979 4186000 GJ/
	1980							1980 an-anno 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

ITALIA

LIT/GJ

	Januar	GENOVA * Verkaufspreis Selling price	GENOVA * Steuern Taxes	GENOVA * Preis ohne Steuern Price without taxes	NAPOLI * Verkaufspreis Selling price	NAPOLI * Steuern Taxes	NAPOLI * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year	1978	2 362	290	2 072				1978 I_1
	1979	2 905	356	2 549				1979 418,6 GJ/
	1980	4 435	544	3 891				1980 an-anno
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978	2 231	274	1 957				1978 I_2
	1979	2 763	339	2 424				1979 4186,0 GJ/
	1980	4 293	527	3 766				1980 an-anno
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	2 045	251	1 794				1978 I_{3-1}
	1979	2 578	316	2 262				1979 41860 GJ/
	1980	4 108	504	3 604				1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	2 035	250	1 785				1978 I_{3-2}
	1979	2 569	316	2 253				1979 41860 GJ/
	1980	4 099	504	3 595				1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	1 923	236	1 687		= TORINO		1978 I_{4-1}
	1979	2 456	302	2 154				1979 418600 GJ/
	1980	3 986	490	3 496				1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	1 922	236	1 686				1978 I_{4-2}
	1979	2 455	302	2 153				1979 418600 GJ/
	1980	3 986	490	3 496				1980 an-anno 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978	1 911	235	1 676				1978 I_5
	1979	2 444	300	2 144				1979 4186000 GJ/
	1980	3 974	488	3 486				1980 an-anno 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

NEDERLAND — HFL/GJ — DANEMARK — DKR/GJ

	Januar	ROTTERDAM * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	KØBENHAVN + Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/Jahr-year	1978	13,58	0,53	13,05	71,94	10,97	60,97	1978	D_{3b}
	1979	15,41	2,36	13,05	82,18	13,84	68,34	1979 8,37 GJ/an-anno	
	1980	16,51	2,53	13,98	116,37	31,54	84,83	1980	
D_2 16,74 GJ/Jahr-year	1978	10,79	0,43	10,36	66,87	10,20	56,67	1978	D_2
	1979	12,24	1,88	10,36	77,01	12,97	64,04	1979 16,74 GJ/an-anno	
	1980	13,12	2,01	11,11	111,20	30,67	80,53	1980	
D_3 83,7 GJ/Jahr-year	1978	7,66	0,30	7,36	46,32	7,07	39,25	1978	D_3
	1979	9,20	1,41	7,79	56,06	9,44	46,62	1979 83,7 GJ/an-anno	
	1980	10,42	1,60	8,82	88,10	26,79	61,31	1980	
D_{3b} 125,6 GJ/Jahr-year	1978	7,38	0,29	7,09	45,15	6,90	38,25	1978	D_{3b}
	1979	8,93	1,37	7,56	54,83	9,23	45,60	1979 125,6 GJ/an-anno	
	1980	10,20	1,56	8,63	86,86	26,57	60,29	1980	
D_4 1047 GJ/Jahr-year	1978	6,96	0,28	6,68	43,17	6,58	36,59	1978	D_4
	1979	8,57	1,32	7,25	52,81	8,89	43,92	1979 1047 GJ/an-anno	
	1980	9,95	1,53	8,42	84,82	26,21	58,61	1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas
\+ Ortsgas
Gasworks gas

* Gas naturel
Gas naturale
\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

NEDERLAND — HFL/GJ — DANEMARK — DKR/GJ

	Januar	ROTTERDAM* Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	KØBENHAVN + Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
I_1 418,6 GJ/ Jahr-year	1978	6,97	0,27	6,70	54,20	8,27	45,93	1978	I_1
	1979	8,54	1,30	7,24	62,35	10,50	51,85	1979 418,6 GJ/	
	1980	9,86	1,50	8,36	97,56	28,38	69,18	1980 an-anno	
I_2 4186,0 GJ/ Jahr-year 200 Tage-days	1978	6,82	0,26	6,56	45,18	6,89	38,29	1978	I_2
	1979	8,40	1,28	7,12	53,16	8,95	44,21	1979 4186,0 GJ/	
	1980	9,75	1,49	8,26	87,12	26,61	60,51	1980 an-anno	
I_{3-1} 41860 GJ/ Jahr-year 200 Tage-days 1 600 h	1978	5,66	0,22	5,44				1978	I_{3-1}
	1979	6,81	1,04	5,77				1979 41860 GJ/	
	1980	8,96	1,37	7,59				1980 an-anno 200 jours-giorni 1 600 h	
I_{3-2} 41860 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	5,66	0,22	5,44				1978	I_{3-2}
	1979	6,81	1,04	5,77				1979 41860 GJ/	
	1980	8,96	1,37	7,59				1980 an-anno 250 jours-giorni 4 000 h	
I_{4-1} 418600 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	5,34	0,21	5,13				1978	I_{4-1}
	1979	6,37	0,97	5,40				1979 418600 GJ/	
	1980	8,64	1,32	7,32				1980 an-anno 250 jours-giorni 4 000 h	
I_{4-2} 418600 GJ/ Jahr-year 330 Tage-days 8 000 h	1978	5,34	0,21	5,13				1978	I_{4-2}
	1979	6,37	0,97	5,40				1979 418600 GJ/	
	1980	8,64	1,32	7,32				1980 an-anno 330 jours-giorni 8 000 h	
I_5 4186000 GJ/ Jahr-year 330 Tage-days 8 000 h	1978	5,19	0,20	4,99				1978	I_5
	1979	5,86	0,89	4,97				1979 4186000 GJ/	
	1980	8,14	1,24	6,90				1980 an-anno 330 jours-giorni 8 000 h	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

BELGIQUE

BFR/GJ

		ANTWERPEN *			LIEGE *			
Januar		Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
D_1 8,37 GJ/Jahr-year	1978	390	22	368	383	22	361	1978 D_{3b}
	1979	390,8	22,1	368,7	386,7	21,9	364,8	1979 8,37 GJ/an-anno
	1980	419,3	23,7	395,6	415,1	23,5	391,6	1980
D_2 16,74 GJ/Jahr-year	1978	363	20	343	350	20	330	1978 D_2
	1979	364,0	20,6	343,4	352,7	20,0	332,7	1979 16,74 GJ/an-anno
	1980	392,2	22,2	370,0	380,5	21,5	359,0	1980
D_3 83,7 GJ/Jahr-year	1978	173	10	163	173	10	163	1978 D_3
	1979	174,7	10,0	164,7	174,7	10,0	164,7	1979 83,7 GJ/an-anno
	1980	199,7	11,3	188,4	199,7	11,3	188,4	1980
D_{3b} 125,6 GJ/Jahr-year	1978	161	9	152	161	9	152	1978 D_{3b}
	1979	163,0	9,2	153,8	163,0	9,2	153,8	1979 125,6 GJ/an-anno
	1980	188,0	10,6	177,4	188,0	10,6	177,4	1980
D_4 1047 GJ/Jahr-year	1978	125	7	118	125	7	118	1978 D_4
	1979	126,4	7,2	119,2	126,4	7,2	119,2	1979 1047 GJ/an-anno
	1980	150,8	8,5	142,3	150,8	8,5	142,3	1980
January		Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

* Gas naturel
Gas naturale

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GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

BELGIQUE — BFR/GJ — Gr.-D. de LUXEMBOURG — LFR/GJ

	Januar	BRUXELLES * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	LUXEMBOURG * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
D_1 8,37 GJ/ Jahr-year	1978	386	22	364	385,5	18,4	367,1	1978 D_1
	1979	389,7	22,1	367,6	406,8	19,4	387,4	1979 8,37 GJ/ an-anno
	1980	418,1	23,7	394,4	409,5	19,5	390,0	1980
D_2 16,74 GJ/ Jahr-year	1978	352	20	332	331,7	15,8	315,9	1978 D_2
	1979	355,4	20,1	335,3	351,4	16,7	334,7	1979 16,74 GJ/ an-anno
	1980	383,4	21,7	361,7	354,9	16,9	338,0	1980
D_3 83,7 GJ/ Jahr-year	1978	173	10	163	137,2	6,5	130,7	1978 D_3
	1979	174,7	10,0	164,7	147,8	7,0	140,8	1979 83,7 GJ/ an-anno
	1980	199,7	11,3	188,4	149,9	7,1	142,8	1980
D_{3b} 125,6 GJ/ Jahr-year	1978	161	9	152	130,8	6,2	124,6	1978 D_{3b}
	1979	163	9,2	153,8	140,8	6,7	134,1	1979 125,6 GJ/ an-anno
	1980	188	10,6	177,4	142,7	6,8	135,9	1980
D_4 1047 GJ/ Jahr-year	1978	125	7	118	116,9	5,6	111,3	1978 D_4
	1979	126,4	7,2	119,2	123,9	5,9	118,0	1979 1047 GJ/ an-anno
	1980	150,8	8,5	142,3	125,4	6,0	119,4	1980
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

* Gas naturel
Gas naturale

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

BELGIQUE

EFR/GJ

	Januar	P = 0,9 * Verkaufspreis Selling price	P = 0,9 * Steuern Taxes	P = 0,9 * Preis ohne Steuern Price without taxes	P = 1,0 * Verkaufspreis Selling price	P = 1,0 * Steuern Taxes	P = 1,0 * Preis ohne Steuern Price without taxes	Janvier	
I_1 418,6 GJ/Jahr-year	1978				151,2	8,6	142,6	1978	I_1
	1979				150,2	8,5	141,7	1979 418,6 GJ/ an-anno	
	1980				172,6	9,8	162,8	1980	
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978				118,5	6,7	111,8	1978	I_2
	1979				119,5	6,8	112,7	1979 4186,0 GJ/ an-anno	
	1980				143,8	8,1	135,7	1980	
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978	106,8	6,0	100,8	115,2	6,5	108,7	1978	I_{3-1}
	1979	107,0	6,1	100,9	115,3	6,5	108,8	1979 41860 GJ/ an-anno	
	1980	129,5	7,3	122,2	140,3	7,9	132,4	1980 200 jours-giorni 1 600 h	
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978	84,2	4,8	79,4	92,5	5,2	87,3	1978	I_{3-2}
	1979	84,0	4,8	79,2	92,3	5,2	87,1	1979 41860 GJ/ an-anno	
	1980	105,7	6,0	99,7	116,4	6,6	109,8	1980 250 jours-giorni 4 000 h	
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978	84,2	4,8	79,4	92,5	5,2	87,3	1978	I_{4-1}
	1979	84,0	4,8	79,2	92,3	5,2	87,1	1979 418600 GJ/ an-anno	
	1980	105,7	6,0	99,7	116,4	6,6	109,8	1980 250 jours-giorni 4 000 h	
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978	76,6	4,3	72,3	85,1	4,8	80,3	1978	I_{4-2}
	1979	76,2	4,3	71,9	84,6	4,8	79,8	1979 418600 GJ/ an-anno	
	1980	97,7	5,5	92,2	108,4	6,1	102,3	1980 330 jours-giorni 8 000 h	
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978	74,4	4,2	70,2	82,6	4,7	77,9	1978	I_5
	1979	73,9	4,2	69,7	81,9	4,6	77,3	1979 4186000 GJ/ an-anno	
	1980	94,6	5,4	89,2	105,0	5,9	99,1	1980 330 jours-giorni 8 000 h	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

BELGIQUE — HFR/GJ — GR-D. de LUXEMBOURG — LFR/GJ

Januar	P = 1,1 * Verkaufspreis Selling price	P = 1,1 * Steuern Taxes	P = 1,1 * Preis ohne Steuern Price without taxes	LUXEMBOURG * Verkaufspreis Selling price	LUXEMBOURG * Steuern Taxes	LUXEMBOURG * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/Jahr-year — 1978				122,2	5,9	116,3	1978 I_1
1979				131,5	6,3	125,2	1979 418,6 GJ/an-anno
1980				133,0	6,3	126,7	1980
I_2 4186,0 GJ/Jahr-year 200 Tage-days — 1978				96,6	4,6	92,0	1978 I_2
1979				109,4	5,2	104,2	1979 4186,0 GJ/an-anno
1980				111,3	5,3	106,0	1980
I_{3-1} 41860 GJ/Jahr-year 200 Tage-days 1 600 h — 1978	123,7	7,0	116,7	85,6	4,1	81,5	1978 I_{3-1}
1979	123,7	7,0	116,7	96,9	4,6	92,3	1979 41860 GJ/an-anno
1980	151,1	8,6	142,5	98,8	4,7	94,1	1980 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/Jahr-year 250 Tage-days 4 000 h — 1978	100,9	5,7	95,2	77,8	3,7	74,1	1978 I_{3-2}
1979	100,7	5,7	95,0	88,7	4,2	84,5	1979 41860 GJ/an-anno
1980	127,2	7,2	120,0	90,3	4,3	86,0	1980 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/Jahr-year 250 Tage-days 4 000 h — 1978	100,9	5,7	95,2				1978 I_{4-1}
1979	100,7	5,7	95,0				1979 418600 GJ/an-anno
1980	127,2	7,2	120,0				1980 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/Jahr-year 330 Tage-days 8 000 h — 1978	93,5	5,3	88,2				1978 I_{4-2}
1979	93,1	5,3	87,8				1979 418600 GJ/an-anno
1980	119,1	6,7	112,4				1980 330 jours-giorni 8 000 h
I_5 4186000 GJ/Jahr-year 330 Tage-days 8 000 h — 1978	90,7	5,1	85,6				1978 I_5
1979	90,0	5,1	84,9				1979 4186000 GJ/an-anno
1980	115,4	6,5	108,9				1980 330 jours-giorni 8 000 h
January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

UNITED KINGDOM

UKL/GJ

	Januar	LEEDS * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	BIRMINGHAM * Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier
D_1 8,37 GJ/ Jahr-year	1978	2,46	-	2,46	2,27	-	2,27	1978 D_{3b}
	1979	2,46	-	2,46	2,27	-	2,27	1979 8,37 GJ/ an-anno
	1980	2,64	-	2,64	2,44	-	2,44	1980
D_2 16,74 GJ/ Jahr-year	1978	2,29	-	2,29	2,20	-	2,20	1978 D_2
	1979	2,29	-	2,29	2,20	-	2,20	1979 16,74 GJ/ an-anno
	1980	2,46	-	2,46	2,36	-	2,36	1980
D_{2b} 33,5 GJ/ Jahr-year	1978	1,96	-	1,96	1,89	-	1,89	1978 D_{2b}
	1979	1,96	-	1,96	1,89	-	1,89	1979 33,5 GJ/ an-anno
	1980	2,09	-	2,09	2,02	-	2,02	
D_3 83,7 GJ/ Jahr-year	1978	1,65	-	1,65	1,62	-	1,62	1978 D_3
	1979	1,65	-	1,65	1,62	-	1,62	1979 83,7 GJ/ an-anno
	1980	1,78	-	1,78	1,75	-	1,75	1980
D_{3b} 125,6 GJ/ Jahr-year	1978	1,60	-	1,60	1,58	-	1,58	1978 D_{3b}
	1979	1,60	-	1,60	1,58	-	1,58	1979 125,6 GJ/ an-anno
	1980	1,70	-	1,70	1,69	-	1,69	1980
D_4 1047 GJ/ Jahr-year	1978	1,61	-	1,61	1,59	-	1,59	1978 D_4
	1979	1,61	-	1,61	1,59	-	1,59	1979 1047 GJ/ an-anno
	1980	1,73	-	1,73	1,71	-	1,71	1980
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS
PRIX DU GAZ POUR USAGES DOMESTIQUES
PREZZI DEL GAS PER USI DOMESTICI

UNITED KINGDOM — UKL/GJ — IRELAND — IRL/GJ

		LONDON, GLASGOW, CARDIFF *			DUBLIN +				
	Januar	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Janvier	
D_1 8,37 GJ/ Jahr-year	1978	2,79	-	2,79	4,37	-	4,37	1978	D_1
	1979	2,79	-	2,79	4,80	-	4,80	1979	8,37 GJ/ an-anno
	1980	3,00	-	3,00	6,72	-	6,72	1980	
D_2 16,74 GJ/ Jahr-year	1978	2,65	-	2,65	4,27	-	4,27	1978	D_2
	1979	2,65	-	2,65	4,69	-	4,69	1979	16,74 GJ/ an-anno
	1980	2,85	-	2,85	6,57	-	6,57	1980	
D_{2b} 33,5 GJ/ Jahr-year	1978	2,17	-	2,17				1978	D_{2b}
	1979	2,17	-	2,17				1979	33,5 GJ/ an-anno
	1980	2,32	-	2,32				1980	
D_3 83,7 GJ/ Jahr-year	1978	1,74	-	1,74	3,34	-	3,34	1978	D_3
	1979	1,74	-	1,74	3,76	-	3,76	1979	83,7 GJ/ an-anno
	1980	1,87	-	1,87	5,28	-	5,28	1980	
D_{3b} 125,6 GJ/ Jahr-year	1978	1,65	-	1,65	3,26	-	3,26	1978	D_{3b}
	1979	1,65	-	1,65	3,68	-	3,68	1979	125,6 GJ/ an-anno
	1980	1,77	-	1,77	5,20	-	5,20	1980	
D_4 1047 GJ/ Jahr-year	1978	1,68	-	1,68				1978	D_4
	1979	1,68	-	1,68				1979	1047 GJ/ an-anno
	1980	1,81	-	1,81				1980	
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio	

* Naturgas
Natural gas
\+ Ortsgas
Gasworks gas

* Gas naturel
Gas naturale
\+ Gaz d'usines
Gas di officina

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

UNITED KINGDOM — UKL/GJ

	Januar	LEEDS * Verkaufspreis Selling price	LEEDS * Steuern Taxes	LEEDS * Preis ohne Steuern Price without taxes	BIRMINGHAM * Verkaufspreis Selling price	BIRMINGHAM * Steuern Taxes	BIRMINGHAM * Preis ohne Steuern Price without taxes	Janvier
I_1 418,6 GJ/ Jahr-year	1978	1,73	-	1,73	1,72	-	1,72	1978 I_1
	1979	1,73	-	1,73	1,72	-	1,72	1979 418,6 GJ/ an-anno
	1980	2,32	-	2,32	2,32	-	2,32	1980
I_2 4186,0 GJ/ Jahr-year 200 Tage-days	1978	1,70	-	1,70	1,69	-	1,69	1978 I_2
	1979	1,70	-	1,70	1,69	-	1,69	1979 4186,0 GJ/ an-anno
	1980	2,28	-	2,28	2,28	-	2,28	1980
I_{3-1} 41860 GJ/ Jahr-year 200 Tage-days 1 600 h	1978							1978 I_{3-1}
	1979							1979 41860 GJ/ an-anno
	1980							1980 200 jours-giorni 1 600 h
I_{3-2} 41860 GJ/ Jahr-year 250 Tage-days 4 000 h	1978							1978 I_{3-2}
	1979							1979 41860 GJ/ an-anno
	1980							1980 250 jours-giorni 4 000 h
I_{4-1} 418600 GJ/ Jahr-year 250 Tage-days 4 000 h	1978	=	LONDON		=	LONDON		1978 I_{4-1}
	1979							1979 418600 GJ/ an-anno
	1980							1980 250 jours-giorni 4 000 h
I_{4-2} 418600 GJ/ Jahr-year 330 Tage-days 8 000 h	1978							1978 I_{4-2}
	1979							1979 418600 GJ/ an-anno
	1980							1980 330 jours-giorni 8 000 h
I_5 4186000 GJ/ Jahr-year 330 Tage-days 8 000 h	1978							1978 I_5
	1979							1979 4186000 GJ/ an-anno
	1980							1980 330 jours-giorni 8 000 h
	January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte esoluse	Gennaio

* Naturgas
Natural gas

* Gaz naturel
Gas naturale

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GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

PRIX DU GAZ POUR USAGES INDUSTRIELS
PREZZI DEL GAS PER USI INDUSTRIALI

UNITED KINGDOM — UKL/GJ — IRELAND — IRL/GJ

Januar	LONDON, GLASGOW, CARDIFF*			DUBLIN+			Janvier
	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	Verkaufspreis Selling price	Steuern Taxes	Preis ohne Steuern Price without taxes	
I_1 418,6 GJ/Jahr-year	1978 1,76 1979 1,76 1980 2,32	-	1,76 1,76 2,32	3,23 3,86 5,44	-	3,23 3,86 5,44	1978 I_1 1979 418,6 GJ/ 1980 an-anno
I_2 4186,0 GJ/Jahr-year 200 Tage-days	1978 1,70 1979 1,70 1980 2,28	-	1,70 1,70 2,28	3,11 3,60 5,19	-	3,11 3,60 5,19	1978 I_2 1979 4186,0 GJ/ 1980 an-anno
I_{3-1} (1) 41860 GJ/Jahr-year 200 Tage-days 1 600 h	1978 1,65 1979 1,77 1980 2,83	-	1,65 1,77 2,83				1978 I_{3-1} 1979 41860 GJ/ 1980 an-anno 200 jours-giorni 1 600 h
I_{3-2} (1) 41860 GJ/Jahr-year 250 Tage-days 4 000 h	1978 1,65 1979 1,77 1980 2,83	-	1,65 1,77 2,83				1978 I_{3-2} 1979 41860 GJ/ 1980 an-anno 250 jours-giorni 4 000 h
I_{4-1} (1) 418600 GJ/Jahr-year 250 Tage-days 4 000 h	1978 1,43 1979 1,53 1980 2,45	-	1,43 1,53 2,45				1978 I_{4-1} 1979 418600 GJ/ 1980 an-anno 250 jours-giorni 4 000 h
I_{4-2} (1) 418600 GJ/Jahr-year 330 Tage-days 8 000 h	1978 1,43 1979 1,53 1980 2,45	-	1,43 1,53 2,45				1978 I_{4-2} 1979 418600 GJ/ 1980 an-anno 330 jours-giorni 8 000 h
I_5 (1) 4186000 GJ/Jahr-year 330 Tage-days 8 000 h	1978 1,22 1979 1,22 1980 1,89	-	1,22 1,22 1,89				1978 I_5 1979 4186000 GJ/ 1980 an-anno 330 jours-giorni 8 000 h
January	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Prix de vente Prezzi di vendita	Taxes Imposte	Prix hors taxes Prezzi imposte escluse	Gennaio

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

(1) Maximale Preise
Maximum prices

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

(1) Prix maximum
Prezzi massimale

TABELLE FÜR DIE UMRECHNUNG
DES KAUFKRAFTSTANDARDS (KKS)

CONVERSION TABLE FOR THE PURCHASING
POWER STANDARD (PPS)

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TABLE DE CONVERSION DU STANDARI
DE POUVOIR D'ACHAT (SPA)

TABELLA DI CONVERSIONE DELLA STANDARD
DI POTERE D'ACQUISTO (SPA)

	BR Deutschland	France	Italia	Nederland	Belgique België	Luxembourg	United Kingdom	Ireland	Danmark	
	1 KKS =				1 PPS =				1 SPA =	
	DM	FF	100 LIT	HFL	BFR	LFR	UKL	IRL	DKR	
1978	3,01	5,93	8,46	3,24	48,16	46,26	0,526	0,541	8,71	1978
1979	2,85	5,96	8,95	3,08	46,09	44,66	0,548	0,551	8,53	1979
1980	2,66	5,91	9,33	2,94	43,94	42,66	0,596	0,572	8,40	1980
Preisindices des BIP GDP price indices				(1973=100)					Indices de prix du PIB Indici dei prezzi del PIL	
1978	126,9	164,9	221,4	148,1	151,8	140,9	210,2	197,4	162,3	1978
1979	131,6	181,7	256,6	154,5	159,2	149,1	239,8	222,9	174,2	1979
1980	137,5	201,7	299,5	165,2	169,9	159,4	291,6	256,1	192,0	1980
Preisindices der letzten Inlandsverwendung Total domestic uses price index				(1973=100)					Indices de prix des emplois finals intérieurs Indici dei prezzi degli impieghi finali interni	
1978	126,5	166,9	226,1	150,7	155,8	152,1	213,5	212,2	166,8	1978
1979	131,2	183,9	262,0	157,2	163,4	160,9	243,4	239,6	179,0	1979
1980	137,1	204,2	305,8	168,0	174,4	172,0	296,2	275,3	197,2	1980

1978 revidiert
1979 und 1980 geschätzt

1978 revised
1979 + 1980 estimated

1978 révisé
1979 et 1980 estimé

1978 aggiornato
1979 e 1980 stima

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GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

Kaufkraftstandard/GJ
Purchasing Power Standard/GJ

Verkaufspreis Selling price		Düsseldorf*	Paris*	Milano+	Rotterdam*	Bruxelles*
D_1	1978	9,77	8,21	7,92	4,19	8,01
8,37 GJ/Jahr GJ/year	1979	10,32	8,99	7,71	5,00	8,46
	1980	11,16	11,49	9,22	5,62	9,52
D_2	1978	7,42	6,92	7,29	3,33	7,31
16,74 GJ/Jahr GJ/year	1979	7,84	7,58	7,12	3,97	7,71
	1980	8,47	9,78	8,65	4,46	8,73
D_3	1978	4,74	4,33	6,14	2,36	3,59
83,7 GJ/Jahr GJ/year	1979	5,01	4,77	6,03	2,99	3,79
	1980	5,42	6,45	8,18	3,54	4,54
D_{3b}	1978	4,23	3,74	6,11	2,28	3,34
125,6 GJ/Jahr GJ/year	1979	4,47	4,16	5,99	2,90	3,54
	1980	4,83	5,74	8,19	3,47	4,28
D_4	1978	3,55	2,97	5,90	2,15	2,60
1047 GJ/Jahr GJ/year	1979	3,75	3,24	5,80	2,78	2,74
	1980	4,06	4,66	8,09	3,38	3,43

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

PRIX DU GAZ POUR USAGES DOMESTIQUES

PREZZI DEL GAS PER USI DOMESTICI

Standard de Pouvoir d'Achat/GJ

Standard Potere d'Acquisto/GJ

Luxembourg*	London*	Dublin+	København+	Prix de vente Prezzi di vendita			
8,33	5,30	8,08	8,26	1978			D_1
9,11	5,09	8,71	9,63	1979	8,37	GJ/an GJ/anno	
9,60	5,03	11,75	13,85	1980			
7,17	5,04	7,89	7,68	1978			D_2
7,87	4,84	8,51	9,03	1979	16,74	GJ/an GJ/anno	
8,32	4,78	11,49	13,24	1980			
2,97	3,31	6,17	5,32	1978			D_3
3,31	3,18	6,82	6,57	1979	83,7	GJ/an GJ/anno	
3,51	3,14	9,23	10,49	1980			
2,83	3,14	6,03	5,18	1978			D_{3b}
3,15	3,01	6,68	6,43	1979	125,6	GJ/an GJ/anno	
3,35	2,97	9,09	10,34	1980			
2,53	3,19		4,96	1978			D_4
2,77	3,07		6,19	1979	1047	GJ/an GJ/anno	
2,94	3,04		10,10	1980			

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR HAUSHALTE

GAS PRICES FOR HOUSEHOLDS

...ufkraftstandard/GJ

Purchasing Power Standard/GJ

Preis ohne Steuern Price without tax		Düsseldorf*	Paris*	Milano+	Rotterdam*	Bruxelles*
D_1	1978	8,73	6,98	6,79	4,03	7,56
8,37 GJ/Jahr GJ/year	1979	9,22	7,65	6,63	4,24	7,98
	1980	9,88	9,77	7,94	4,76	8,98
D_2	1978	6,62	5,88	6,20	3,20	6,89
16,74 GJ/Jahr GJ/year	1979	7,00	6,44	6,07	3,36	7,27
	1980	7,50	8,32	7,41	3,78	8,23
D_3	1978	4,24	3,68	5,11	2,27	3,38
83,7 GJ/Jahr GJ/year	1979	4,47	4,06	5,04	2,53	3,57
	1980	4,79	5,49	6,97	3,00	4,29
D_{3b}	1978	3,78	3,18	5,08	2,19	3,16
125,6 GJ/Jahr GJ/year	1979	3,99	3,54	5,01	2,45	3,34
	1980	4,27	4,88	6,97	2,94	4,04
D_4	1978	3,17	2,52	4,89	2,06	2,45
1047 GJ/Jahr GJ/year	1979	3,35	2,76	4,83	2,35	2,59
	1980	3,59	3,96	6,88	2,86	3,24

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

PRIX DU GAZ POUR USAGES DOMESTIQUES

PREZZI DEL GAS PER USI DOMESTICI

Standard de Pouvoir d'Achat/GJ

Standard Potere d'Acquisto/GJ

Luxembourg*	London*	Dublin+	København+	Prix hors taxes Prezzi imposte escluse			
7,94	5,30	8,08	7,00	1978			D_1
8,67	5,09	8,71	8,01	1979	8,37	GJ/an GJ/anno	
9,14	5,03	11,75	10,10	1980			
6,83	5,04	7,89	6,51	1978			D_2
7,49	4,84	8,51	7,51	1979	16,74	GJ/an GJ/anno	
7,92	4,78	11,49	9,59	1980			
2,83	3,31	6,17	4,51	1978			D_3
3,15	3,18	6,82	5,47	1979	83,7	GJ/an GJ/anno	
3,35	3,14	9,23	7,30	1980			
2,69	3,14	6,03	4,39	1978			D_{3b}
3,00	3,01	6,68	5,35	1979	125,6	GJ/an GJ/anno	
3,19	2,97	9,09	7,18	1980			
2,41	3,19		4,20	1978			D_4
2,64	3,07		5,15	1979	1047	GJ/an GJ/anno	
2,80	3,04		6,98	1980			

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR HAUSHALTE
GAS PRICES FOR HOUSEHOLDS

Zeitbereinigte indices
Deflated indices

1973 = 100

Verkaufspreis Selling price		Düsseldorf*	Paris*	Milano+	Rotterdam*	Bruxelles*
D_1	1978	120,5	97,3	107,4	93,6	94,2
8,37 GJ/Jahr GJ/year	1979	116,2	97,1	95,5	101,8	90,8
	1980	112,2	110,9	101,9	102,1	91,1
D_2	1978	110,0	96,8	106,2	89,8	92,2
16,74 GJ/Jahr GJ/year	1979	106,1	96,7	94,7	97,7	88,8
	1980	102,4	111,5	102,7	98,0	89,7
D_3	1978	139,7	101,4	140,3	125,4	91,7
83,7 GJ/Jahr GJ/year	1979	134,7	101,9	125,8	144,4	88,3
	1980	130,1	123,1	152,4	153,1	94,6
D_{3b}	1978	135,4	105,1	143,4	140,8	100,3
125,6 GJ/Jahr GJ/year	1979	130,6	106,5	128,5	162,4	96,9
	1980	126,1	131,3	156,9	174,4	104,7
D_4	1978	139,8	132,0	187,8	184,8	113,0
1047 GJ/Jahr GJ/year	1979	134,9	131,5	168,5	218,0	109,0
	1980	130,1	168,7	209,9	236,8	121,8

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

PRIX DU GAZ POUR USAGES DOMESTIQUES

PREZZI DEL GAS PER USI DOMESTICI

1973 = 100

Indices déflatés

Indici deflazionati

Luxembourg*	London*	Dublin+	København+	Prix de vente / Prezzi di vendita			
101,4	72,0	95,8	142,4	1978			D_1
101,1	63,2	93,0	151,6	1979	8,37	GJ/an GJ/anno	
95,2	55,5	113,5	194,9	1980			
97,4	78,5	99,0	164,8	1978			D_2
97,5	69,0	96,6	176,9	1979	16,74	GJ/an GJ/anno	
92,1	60,8	117,7	231,9	1980			
140,9	87,1	145,4	166,1	1978			D_3
143,6	76,3	145,4	187,3	1979	83,7	GJ/an GJ/anno	
136,3	67,7	177,8	267,2	1980			
145,8	91,7	154,0	176,5	1978			D_{3b}
148,3	81,0	154,0	199,7	1979	125,6	GJ/an GJ/anno	
140,7	71,4	189,0	287,2	1980			
153,8	114,0		201,9	1978			D_4
154,0	100,0		230,1	1979	1047	GJ/an GJ/anno	
145,8	88,6		335,5	1980			

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR DIE INDUSTRIE

GAS PRICES FOR INDUSTRY

Kaufkraftstandard/GJ

Purchasing Power Standard/GJ

	Verkaufspreis Selling price		Düsseldorf*	Paris*	Milano+*	Rotterdam*	Bruxelles*
I_1		1978	4,80	3,54	6,44	2,15	3,14
	418,6 GJ/Jahr GJ/year	1979	5,07	3,62	6,32	2,77	3,26
		1980	5,48	5,10	7,87 +	3,35	3,93
I_2		1978	2,87	3,02	5,72	2,10	2,46
	4186 GJ/Jahr GJ/year	1979	3,03	3,06	5,65	2,73	2,59
	200 Tage-days	1980	4,48	4,44	7,85 +	3,32	3,27
I_{3-1}	41860 GJ/Jahr GJ/year	1978	2,69	2,52	2,54	1,75	2,39
		1979	2,84	2,51	2,45	2,21	2,50
	200 Tage-days 1600 h	1980	4,12	3,81	4,14 *	3,05	3,19
I_{3-2}	41860 GJ/Jahr GJ/year	1978	2,56	2,22	2,54	1,75	1,92
		1979	2,71	2,21	2,45	2,21	2,00
	250 Tage-days 4000 h	1980	3,95	3,70	4,14 *	3,05	2,65
I_{4-1}	418600 GJ/Jahr GJ/year	1978	2,36	1,86	2,49	1,65	1,92
		1979	2,69	1,85	2,40	2,07	2,00
	250 Tage-days 4000 h	1980	3,92	3,37	4,05 *	2,94	2,65
I_{4-2}	418600 GJ/Jahr GJ/year	1978	2,25	1,80	2,49	1,65	1,77
		1979	2,58	1,79	2,40	2,07	1,84
	330 Tage-days 8000 h	1980	3,76	3,29	4,05 *	2,94	2,47
I_5	4186000 GJ/Jahr GJ/year	1978		1,73	2,41	1,60	1,72
		1979		1,72	2,32	1,90	1,78
	330 Tage-days 8000 h	1980		3,25	3,92 *	2,77	2,39

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

PRIX DU GAZ POUR USAGES INDUSTRIELS

PREZZI DEL GAS PER USI INDUSTRIALI

Standard de Pouvoir d'Achat/GJ

Standard Potere d'Acquisto/GJ

Luxembourg*	London*	Dublin+	København+	Prix de vente Prezzi di vendita		
2,64	3,35	5,97	6,22	1978		I_1
2,94	3,21	7,01	7,31	1979	418,6 GJ/an-anno	
3,12	3,89	9,51	11,61	1980		
2,09	3,23	5,75	5,19	1978		I_2
2,45	3,10	6,53	6,23	1979	4186 GJ/an-anno 200 jours-giorni	
2,61	3,83	9,07	10,37	1980		
1,85	3,14			1978		I_{3-1}
2,17	3,23			1979	41860 GJ/an-anno 200 jours-giorni 1600 h	
2,32	4,75			1980		
1,68	3,14			1978		I_{3-2}
1,99	3,23			1979	41860 GJ/an-anno 250 jours-giorni 4000 h	
2,12	4,75			1980		
	2,72			1978		I_{4-1}
	2,79			1979	418600 GJ/an-anno 250 jours-giorni 4000 h	
	4,11			1980		
	2,72			1978		I_{4-2}
	2,79			1979	418600 GJ/an-anno 330 jours-giorni 8000 h	
	4,11			1980		
	2,32			1978		I_5
	2,23			1979	4186000 GJ/an-anno 330 jours-giorni 8000 h	
	3,17			1980		

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

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GASPREISE FÜR DIE INDUSTRIE

GAS PRICES FOR INDUSTRY

Kaufkraftstandard/GJ

Purchasing Power Standard/GJ

Preis ohne Steuern / Price without tax		Düsseldorf*	Paris*	Milano+*	Rotterdam*	Bruxelles*
I_1	1978	4,29	3,01	5,65	2,07	2,96
418,6 GJ/Jahr GJ/year	1979	4,53	3,08	5,55	2,35	3,07
	1980	4,85	4,34	6,90 +	2,84	3,71
I_2	1978	2,56	2,56	5,02	2,02	2,32
4186 GJ/Jahr GJ/year	1979	2,71	2,60	4,95	2,31	2,45
200 Tage-days	1980	3,96	3,78	6,88 +	2,81	3,09
I_{3-1}	1978	2,40	2,14	2,23	1,68	2,26
41860 GJ/Jahr GJ/year	1979	2,53	2,13	2,15	1,87	2,36
200 Tage-days 1600 h	1980	3,65	3,24	3,63 *	2,58	3,01
I_{3-2}	1978	2,29	1,89	2,23	1,68	1,81
41860 GJ/Jahr GJ/year	1979	2,42	1,88	2,15	1,87	1,89
250 Tage-days 4000 h	1980	3,50	3,15	3,63 *	2,58	2,50
I_{4-1}	1978	2,11	1,58	2,19	1,58	1,81
418600 GJ/Jahr GJ/year	1979	2,41	1,57	2,10	1,75	1,89
250 Tage-days 4000 h	1980	3,47	2,86	3,55 *	2,49	2,50
I_{4-2}	1978	2,01	1,53	2,19	1,58	1,67
418600 GJ/Jahr GJ/year	1979	2,30	1,52	2,10	1,75	1,73
330 Tage-days 8000 h	1980	3,33	2,73	3,55 *	2,49	2,33
I_5	1978		1,47	2,11	1,54	1,62
4186000 GJ/Jahr GJ/year	1979		1,46	2,04	1,61	1,68
330 Tage-days 8000 h	1980		2,76	3,43 *	2,35	2,26

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

PRIX DU GAZ POUR USAGES INDUSTRIELS

PREZZI DEL GAS PER USI INDUSTRIALI

Standard de Pouvoir d'Achat/GJ

Standard Potere d'Acquisto/GJ

Luxembourg*	London*	Dublin+	København+	Prix hors taxes Prezzi imposte escluse		
2,51	3,35	5,97	5,27	1978		I_1
2,80	3,21	7,01	6,08	1979	418,6 GJ/an-anno	
2,97	3,89	9,51	8,24	1980		
1,99	3,23	5,75	4,40	1978		I_2
2,33	3,10	6,53	5,18	1979	4186 GJ/an-anno 200 jours-giorni	
2,48	3,83	9,07	7,20	1980		
1,76	3,14			1978		I_{3-1}
2,07	3,23			1979	41860 GJ/an-anno 200 jours-giorni 1600 h	
2,21	4,75			1980		
1,60	3,14			1978		I_{3-2}
1,89	3,23			1979	41860 GJ/an-anno 250 jours-giorni 4000 h	
2,02	4,75			1980		
	2,72			1978		I_{4-1}
	2,79			1979	418600 GJ/an-anno 250 jours-giorni 4000 h	
	4,11			1980		
	2,72			1978		I_{4-2}
	2,79			1979	418600 GJ/an-anno 330 jours-giorni 8000 h	
	4,11			1980		
	2,32			1978		I_5
	2,23			1979	4186000 GJ/an-anno 330 jours-giorni 8000 h	
	3,17			1980		

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

GASPREISE FÜR DIE INDUSTRIE
GAS PRICES FOR INDUSTRY

Zeitbereinigte indices
Deflated indices

1973 = 100

	Verkaufspreis Selling price		Düsseldorf*	Paris*	Milano+*	Rotterdam*	Bruxelles*
I_1		1978	108,1	94,1	115,5	171,5	101,9
	418,6 GJ/Jahr GJ/year	1979	104,3	87,9	103,5	201,1	96,5
		1980	100,7	110,6	115,1	217,4	104,0
I_2		1978	137,4	90,7	142,4	188,8	124,5
	4186 GJ/Jahr GJ/year	1979	132,6	84,0	128,3	222,5	119,6
	200 Tage-days	1980	174,8	108,9	159,2	241,7	135,0
I_{3-1}		1978	147,5	138,1	216,4	156,0	130,3
	41860 GJ/Jahr GJ/year	1979	142,2	125,3	190,2	179,7	124,5
	200 Tage-days 1600 h	1980	184,1	144,8	286,8	221,2	141,8
I_{3-2}		1978	146,6	139,1	216,4	156,0	207,7
	41860 GJ/Jahr GJ/year	1979	141,3	126,2	190,2	179,7	197,6
	250 Tage-days 4000 h	1980	184,4	160,2	286,8	221,2	233,2
I_{4-1}		1978	181,6	137,4	221,9	157,3	207,7
	418600 GJ/Jahr GJ/year	1979	189,3	124,7	195,0	180,0	197,6
	250 Tage-days 4000 h	1980	246,3	172,3	294,0	228,4	233,2
I_{4-2}		1978	182,3	138,8	221,9	157,3	228,5
	418600 GJ/Jahr GJ/year	1979	191,1	126,0	195,0	180,0	216,7
	330 Tage-days 8000 h	1980	248,8	175,5	294,0	228,4	260,3
I_5		1978		147,5	218,7	193,3	248,8
	4186000 GJ/Jahr GJ/year	1979		133,8	192,5	209,6	235,2
	330 Tage-days 8000 h	1980		191,8	290,0	272,5	282,6

* Naturgas
Natural gas

\+ Ortsgas
Gasworks gas

1973 = 100

Indices déflatés
Indici deflazionati

Luxembourg*	London*	Dublin+	København+	Prix de vente Prezzi di vendita		
146,0	80,4	129,1	142,1	1978		I_1
148,5	70,6	136,5	152,4	1979	418,6 GJ/an-anno	
140,5	76,5	167,5	216,4	1980		
151,2	103,9	135,7	158,0	1978		I_2
161,9	90,9	139,0	173,2	1979	4186 GJ/an-anno 200 jours-giorni	
154,0	100,0	174,4	257,6	1980		
156,4	114,9			1978		I_{3-1}
167,2	109,0			1979	41860 GJ/an-anno 200 jours-giorni 1600 h	
159,4	143,3			1980		
155,2	114,9			1978		I_{3-2}
167,0	109,0			1979	41860 GJ/an-anno 250 jours-giorni 4000 h	
159,0	143,3			1980		
	108,1			1978		I_{4-1}
	101,6			1979	418600 GJ/an-anno 250 jours-giorni 4000 h	
	133,9			1980		
	108,1			1978		I_{4-2}
	101,6			1979	418600 GJ/an-anno 330 jours-giorni 8000 h	
	133,9			1980		
	211,1			1978		I_5
	185,2			1979	4186000 GJ/an-anno 330 jours-giorni 8000 h	
	237,0			1980		

* Gaz naturel
Gas naturale

\+ Gaz d'usines
Gas di officina

PRESS NOTICES AND PUBLICATIONS

'ENERGY STATISTICS'

Edition 1980

MONTHLY STATISTICS

A – Publications (d/e/f)

- Monthly bulletin Coal
- Monthly bulletin Hydrocarbons
- Monthly bulletin Electrical energy

B – Press notice (d/e/f)

- Energy supply aspects of the nuclear power stations (restricted diffusion)

ANNUAL STATISTICS

A – Statistical telegrams (d/e/f) (free of charge)

*– Coal industry activity
*– Oil market activity
*– Natural gas supply economics
*– Electricity supply economics
*– Energy economy

B – Publications

- Operations of nuclear power stations (e/f)
- Energy statistics yearbook (d/e/f/i)

Yearbook annex (free of charge) :

- Primary energy equivalents balance sheets 1970–78 (f)
- Useful energy balance sheets 1978 (e/f)
- Energy balance sheets methodology (d-e-f)
- Gas prices 1978–1980 (e-f)

NOTE :

1) Non periodical publications – edition 1979
   *– Gas prices 1976–1978 (d-e-f-i)
   *– Electrical energy prices 1973–1978 (e/f - d/i)
   *– Useful energy balance sheets 1975 (e/f)
2) Publication dates are given in the monthly publication 'Eurostat news'

* published and available

NOTES ET PUBLICATIONS

"STATISTIQUES DE L'ENERGIE"

Edition 1980

STATISTIQUES MENSUELLES

A – Publications (d/e/f)

- Bulletin mensuel Charbon
- Bulletin mensuel Hydrocarbures
- Bulletin mensuel Energie électrique

B – Note rapide (d/e/f)

- Exploitation des centrales nucléaires (diffusion restreinte)

STATISTIQUES ANNUELLES

A – Télégrammes statistiques (d/e/f) (gratuit)

*– L'activité charbonnière
*– L'activité pétrolière
*– L'économie du gaz naturel
*– L'économie électrique
*– L'économie de l'énergie

B – Publications

- Exploitation des centrales nucléaires (e/f)
- Annuaire des statistiques de l'énergie (d/e/f/i)

Annexes à l'annuaire (gratuit) :

- Bilans de l'énergie, en équivalent primaire 1970–78 (f)
- Bilans en énergie utile 1978 (e/f)
- Méthodologie des bilans de l'énergie (d-e-f)
- Prix du gaz 1978–1980 (e-f)

NOTA :

1) Publications non-périodiques – édition 1979
   *– Prix du gaz 1976–1978 (d-e-f-i)
   *– Prix de l'énergie électrique 1973–1978 (e/f - d/i)
   *– Bilans en énergie utile 1975 (e/f)
2) Le calendrier des publications est indiqué mensuellement dans "Informations de l'Eurostat"

* parues et disponibles

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