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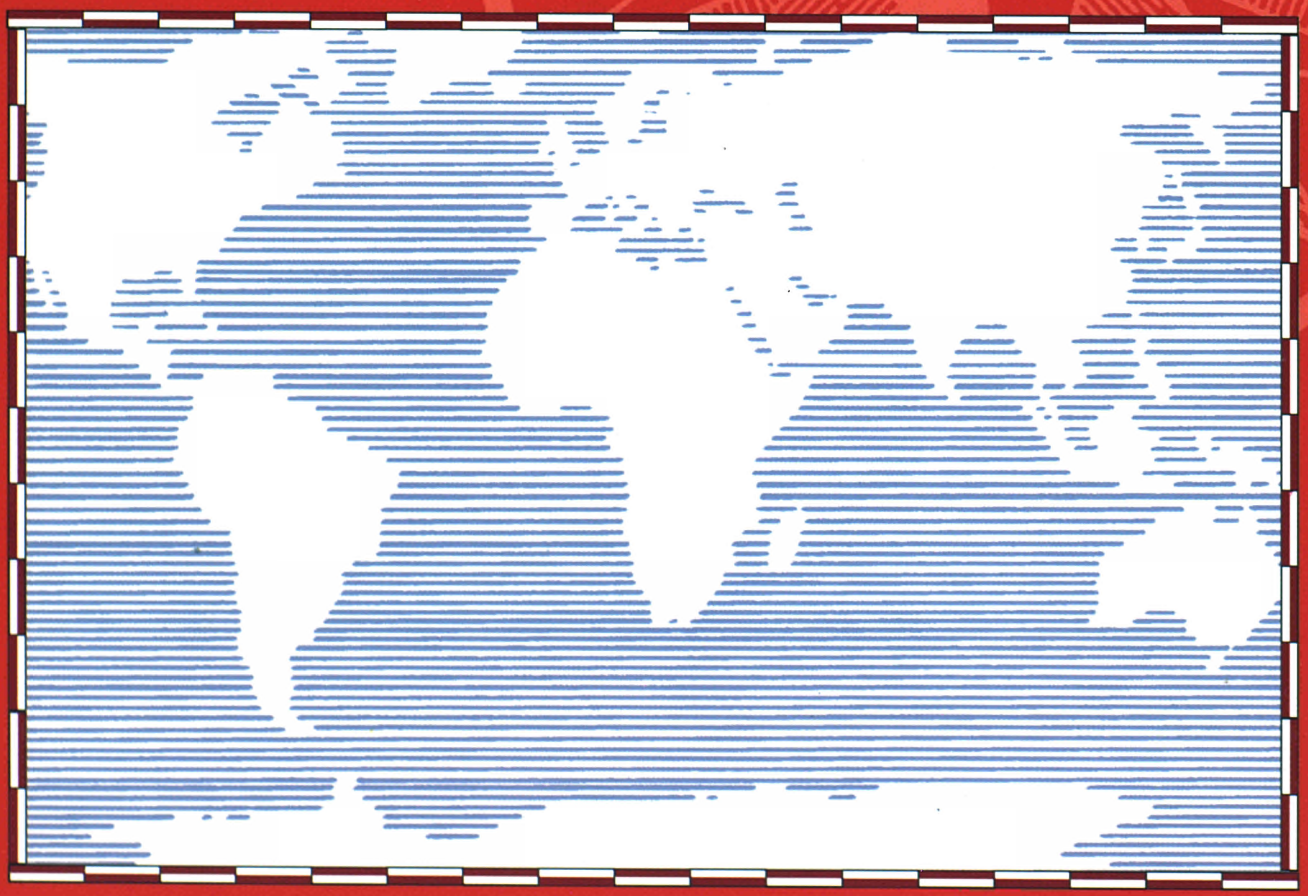
ENERGY IN EUROPE

1993 - ANNUAL ENERGY REVIEW

SPECIAL ISSUE - JUNE 1994



EUROPEAN COMMISSION

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DG II	Directorate-General for Economic Affairs of the European Commission
DG XVII	Directorate-General for Energy of the European Commission
EFTA	European Free Trade Agreement
Energy Intensity	Ratio of GIC to GDP
EU	European Union
GCC	Gulf Co-operation Council
GDP	Gross Domestic Product
GIC	Gross Inland Consumption
GDR	German Democratic Republic
GW	GigaWatt, or 10^9 Watt
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IMF	International Monetary Fund
l	Litre
kl	Thousand litre
kWh	Thousand Watt.hour
MECU	Million ECU
Mt	Million metric tonne
Mtoe	Million toe
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
OLADE	Organizacion Latinoamericana de Energia
S	Sulphur
SOEC	Statistical Office of the European Commission
STEO	Short-Term Energy Outlook for the European Union
t	Metric tonne, or 1000 kilograms
toe	Tonne of oil equivalent, or 10^7 kilo calories, or 41.86 GJ
TWh	Tera Watt.hour, or 10^{12} Watt.hour
UN	United Nations
UN-ECE	UN's Economic Commission for Europe
WB	World Bank

The pace of energy policy debate is quickening : last autumn, the Commission initiated a round of contacts with Member States, consumers and producers. This ongoing process of dialogue is important because of the complexities emerging in looking towards the future.

The structure of this debate focuses on four major themes - the interaction between energy and :

- *the economy;*
- *the external dimension;*
- *the environment, including climate change; and finally,*
- *the energy industry itself.*

Supporting and facilitating the debate on these themes needs developed analytical efforts, both in terms of what happened in the past and what may develop in the near future. Our ambition in presenting this Annual Energy Review is to continue to provide elements for observing and monitoring developments and thus, to contribute to the political decisions which must be made within the European Union.

In order to make what is essentially an historical statistical analysis relevant to policy debate, the Review focuses for example on monitoring trends in energy supply and demand and CO2 emissions by Member State and world regions. Leading indicators such as energy intensity and CO2 emissions published are supported by substantial and detailed data by country, by fuel, and by end use and transformation sectors.

Since last year, coverage in the Review has been expanded to provide more information on individual world regions and major countries within these. In the preparation, we have benefited from close co-operation with the IEA and OLADE among others, and are happy to develop and deepen such links with similar agencies and organisations. The definition of world regions has changed to take account of NAFTA. Similarly, "OECD Pacific" and "Mediterranean" (including Turkey) are explicitly identified. Also for all regions and countries covered, the time series shown now extend back to 1974. This analysis of change evident over almost twenty years, aims at supporting current energy prospective analysis to 2020 and simultaneously contribute to the ongoing policy debate.

For the European Union, instead of individual presentations by Member State, the emphasis in this Review is put on comparative analysis of consumption and main indicators among Member States. The effects of likely enlargement of the Union, to include the four EFTA applicants, are summarised for some key indicators. Finally, the Short-Term Energy Outlook for the European Union in 1994 and 1995 as presented includes a major re-estimation of the model to take full historical account of the new German Länder.

To close, I want to join with my colleagues in dedicating this issue to the memory of Nikitas Deimezis, one of the founders of this publication and a major contributor to enriching the analytical efforts of DG XVII since 1987.

C.S. Maniatopoulos
Director-General for Energy

THE REVIEW IS PRESENTED HERE IN TWELVE PARTS ACCORDING TO THE MOST IMPORTANT WORLD REGIONS

THE FIRST PART

provides an overview of world energy by region.

PART II

looks at Western Europe and analyses in detail the European Union, including summary tables on energy prices, and EFTA countries.

PART III

analyses Central and Eastern Europe in some detail by country.

PART IV

provides information on the former USSR.
In this part there is an attempt to show details for each Republic of the former USSR,
to the extent of availability of statistical data.

THE OTHER PARTS

look at the other world regions but in less detail.
Finally, the Short-Term Energy Outlook for the European Union is reviewed for 1994 and 1995.
Some of the key findings are summarised in the next pages.

WORLD

ENERGY CONSUMPTION GREW OVER THE PERIOD 1974 TO 1992 BY ALMOST 2% PER YEAR, SLOWING DOWN IN 1991 TO LESS THAN HALF THE ANNUAL AVERAGE IN THE WHOLE PERIOD AND PRACTICALLY STAGNATING IN 1992; BUT THERE WERE CLEAR REGIONAL DIFFERENCES:

• Within OECD in 1992, consumption decreased in the European Union and EFTA countries due to warmer weather and relatively modest growth in economic activity; but increased by more than 1% in North America and the rest of OECD;

• Outside of OECD, Asia accelerated its growth, back to the high rates seen in the second half of the 1970s;

• Due mainly to significant falls in the former USSR and Central and Eastern Europe, consumption growth in non-OECD countries declined slightly after 1990; This was a reversal of the earlier pattern.

THE FUEL MIX IS CHANGING:

• Oil remains the predominant source, although it has lost share in total world consumption from around 50% in 1974 to less than 40% in 1992; OPEC is a major oil producer but its share in total oil production decreased from almost 50% in 1974 to under 40% in 1992;

• Natural gas is growing strongly in most markets;

• Solid fuels have declined since 1990, after steady growth in the last two decades;

• Renewable energy sources grew at 3% per year in the period and accounted for 10% of total needs in 1992;

• Reflecting growing penetration of electricity in final demand, electricity generation increased by 4% per year world-wide, mainly due to sustained growth in non-OECD regions; In 1992,

- Growth slowed in the OECD compared to historical rates, but the fall in output in the former USSR accelerated to more than 6%;
- Nuclear fell for the first time due to a sharp drop in the former USSR (18%) and its contribution appears to be reaching a plateau in many regions;
- The contribution of thermal generation decreased from about three quarters of total generation in 1974 to below two thirds in 1991; Solids have increased their supply share in thermal to 60% in 1991;
- Use of natural gas has grown steadily by 4% since 1974, partly displacing oil and becoming more important from 1986;
- Renewable sources have lost share in total generation from about one quarter in 1974 to one fifth in 1991, mainly due to the fact that hydro output grew slower than total demand.

NON-OECD REGIONS ARE SLOWLY INCREASING IN IMPORTANCE AS ENERGY PRODUCERS:

• In 1992, non-OECD production grew twice as fast as the OECD's; this despite a worsening of the decline in the former USSR and in Central and Eastern Europe;

• After the Gulf war which caused a fall of almost 2%, Middle East production increased by almost 10%;

ENERGY IMPORTS ARE PLAYING AN INCREASING ROLE IN OECD IN THE 1990S:

• Although OECD dependency on imports dropped from 39% in 1974 to 26% in 1986, it shows a slight upward trend since then;

• The European Union remains the world's largest importer, although in 1992 import volumes were 7% below the 1974 levels; but, after a decrease to 1986, net energy imports grew at about 4% per year to 1992;

• OECD Pacific is next largest importer but growing more slowly since 1986;

• NAFTA imports, third largest, grew rapidly at 6% per year between 1986 and 1992;

• Exports from former USSR grew 2% in 1992 but they remained at one quarter below the 1990 peak;

• Despite a drop in absolute export volumes compared to 1974, the Middle East is the world's largest exporter, increasing its volumes by 7% per year since 1986; in 1992 it accounted for 55% of total exports.

CO2 EMISSIONS PARALLEL ENERGY CONSUMPTION:

• World-wide CO2 emissions steadily increased at nearly 2% per year to 1990, stabilising in 1991;

• Since 1974 non-OECD emissions rose over 3% per year, and, in 1991, they accounted for almost half of the world emissions;

EUROPEAN UNION

ENERGY CONSUMPTION IS STRONGLY INFLUENCED BY WEATHER CONDITIONS AND ECONOMIC ACTIVITY:

• Despite a slight recovery in economic growth in 1992 compared to 1991 (1.4% against 0.9%), warmer weather conditions led to a slight decrease in energy demand;

• The 1993 economic recession is expected to result in a 1% drop in energy demand;

• Since 1974, the long-term trend indicates energy consumption growing by almost 1% per year while economic activity increased at slightly more than 2%;

• Consumption in industry fell almost steadily over the whole period;

• Growth in the transport sector in 1992 was 2.6%, faster than in 1991 (1.4%); the long-term ratio of transport energy demand to GDP of 1.5, increased in 1992 to 1.8; but the decline in real fuel prices is pertinent to this evolution;

• A significant drop in demand for the domestic and tertiary sectors (almost 3%) was evident in 1992 mainly due to warmer weather; The long-term trend of demand growth in these two sectors is 0.6% per year;

• But there are differences among Member States; for example in 1992
- While in Portugal final demand increased 4.3%, in Ireland it dropped 3.2%.

FUEL SWITCHING CONTINUED:

• Gas demand declined in 1992, reflecting lower use in the domestic and tertiary sectors, as well as in power generation; But the long-term trend in gas demand is the fastest among all fossil fuels (almost 3% per year);

• Final consumption of electricity continued to grow strongly; and despite a little slow down in 1991 and 1992, it grew faster than total final energy demand;

- Nuclear growth slowed compared to the trend to 1990, and seems to be close to stabilisation;
- Conventional thermal generation decreased in 1992, with reductions in demand for solids and gas; but with an increase in the utilisation of oil-fired units;
- The use of biomass (industrial and urban waste) decreased in 1992, against a long-term increase of 5% until 1990;
- Geothermal generation has been stable throughout the period.

ENERGY AND OIL DEPENDENCY ON EXTERNAL SUPPLIES CONTINUED TO INCREASE:

• Since 1986 energy and oil consumption are growing faster than domestic production, but external dependency in 1992 (51%) is still a good deal better than the 62% in 1974;

• For natural gas and only after 1990, European production grew faster than demand.

ENERGY EFFICIENCY GAINS ARE SLOWING DOWN:

• The long-term trend of energy efficiency improvements is 1.4% per year, except in the cases of Greece, Portugal and Spain, where energy intensities are increasing;

• Energy intensity decreased annually by 1.8% from 1986 to 1990, and only declined by 0.8% per year between 1990 and 1992

CO2 EMISSIONS GROWING SLOWER THAN ENERGY CONSUMPTION:

• The long-term trend since 1974 indicates a drop in the CO2 intensity of the European Union energy system from almost 3 t of CO2 per toe in 1974 to 2.5 t of CO2 per toe in 1990. In 1991 and 1992, there was a stabilisation around this latest ratio; This was mainly due to the penetration of nuclear in power generation, to decreasing demand in industry and to higher penetration of gas and electricity in final demand sectors;

• The transport sector reports the fastest growth since 1974 (3% per year);

• Power generation remains the sector with the highest level of CO2 emissions (almost one third) and with the second fastest growth in the period (0.7% per year).

AVERAGE COMMUNITY ENERGY PRICES DECLINING IN REAL TERMS SINCE 1986

• For industry gas prices falling most rapidly, electricity least; some price convergence among Member States, except for solid fuels;

• For transport fuels, some fluctuations since 1986, but 1993 prices slightly down on 1986 levels; Some price convergence among Member States, but clearly still with different behaviours including relative attractiveness of diesel versus gasoline;

• In domestic and tertiary sectors oil prices have decreased faster than those of gas, electricity again showing smallest reductions; No convergence of prices evident among Member States.

THE WORLD IS DIVIDED INTO THE FOLLOWING REGIONS:

EUROPEAN UNION
Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom;

EFTA
Austria, Finland, Iceland, Norway, Sweden and Switzerland;

CENTRAL AND EASTERN EUROPE
Albania, Bulgaria, former Czechoslovakia, Hungary, Poland, Romania and former Yugoslavia;

FORMER USSR
Armenia; Azerbaijan; Belarus; Estonia; Georgia; Kazakhstan; Kyrgyzstan; Latvia; Lithuania; Moldova; Russia; Tajikistan; Turkmenistan; Ukraine; Uzbekistan;

NAFTA
Canada, Mexico and the United States of America;

OECD PACIFIC
Australia, Japan and New Zealand;

MEDITERRANEAN
Cyprus, Gibraltar, Malta and Turkey;

AFRICA
North Africa (Algeria, Egypt, Libya, Morocco and Tunisia) and all other African countries not included elsewhere;

MIDDLE EAST
Bahrain, Israel, Iran, Iraq, Lebanon, Kuwait, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen;

ASIA
China, Newly Industrialising Economies (Hong Kong, Singapore, South Korea and Taiwan) and all other Asian countries not included elsewhere and the Pacific islands;

LATIN AMERICA
Brazil, Venezuela and all other Central and South American countries.

Data cover the period from 1974 to 1992 for the OECD Countries and up to 1991 for all non-OECD Countries. Data for 1992 in non-OECD Countries are shown wherever provisional figures were available. The STEO covers the period from the third Quarter 1993 to the fourth Quarter of 1995.

THE LIST OF DATA SOURCES IS:

- All European Union and its Member States energy data were taken from the Statistical Office of the European Commission (SOEC), except for 1974 energy data on Portugal and Spain and the former German Democratic Republic energy data between 1974 and 1990 which were taken from the International Energy Agency (IEA), and except for the economic indicators (GDP and population) of the former German Democratic Republic - in this case, estimates provided by the Commission's Directorate-General of Economic Affairs (DG II), by the UN and by PlanEcon were used, Data on electricity generating capacities were provided by ESAP (Belgium); The monthly data of the former German Democratic Republic, included in our Short-Term Energy Outlook of the European Union, was constructed with the help of Dr. J. Hesselbach of the IFE Leipzig GmbH. We call the reader's attention to the fact that data for the STEO are based on monthly statistics while all other data are based on annual balance sheets; The difference between monthly and annual series may sometimes be significant;

- Energy data for all other OECD Countries came from the International Energy Agency (IEA) energy balances; The respective macroeconomic and population data were taken from OECD, UN, World Bank and IMF statistics; Data on electricity generating capacities were provided by ESAP (Belgium);

- All energy data for non-OECD Countries, except Central and Eastern Europe and the former USSR, and Latin America came from the IEA energy balances; the respective macroeconomic and population data were taken from both UN, World Bank and IMF statistics; Wherever available, data on electricity generating capacities were provided by ESAP (Belgium);

- All energy data for the Central and Eastern European Countries and the former USSR came from the IEA energy balances; The respective macroeconomic and population data were taken from the UN, World Bank, IMF and PlanEcon statistics; Wherever available, data on electricity generating capacities were provided by ESAP (Belgium);

- All data for Latin American Countries came from OLADE and were checked against the respective energy balances provided by the IEA; the respective macroeconomic and population and electricity generating capacities data were taken from the OLADE statistics;

- Prices of oil products came from DGXVII statistics; Average prices for electricity and natural gas were taken from the IEA "Energy Price Statistics".

- Difficulties in collecting data for non-OECD Countries lead us to advise a degree of caution regarding the data quality in these cases. Thus, comparisons between series of absolute values should be regarded as purely indicative.

A FEW WORDS ON METHODOLOGY AND DEFINITIONS ARE NECESSARY.

GENERAL

Primary hydro-electricity production is considered in terms of net calorific value (1 GWh = 86 toe) and **primary nuclear** production is calculated as fuel equivalent to produce the same amount of electricity in a power station with a thermal efficiency of 33%.

Biomass data for OECD Countries (excluding European Union Member States) correspond to what the IEA shows in its energy balances under "Other Solid Fuels". Data for all non-OECD Countries correspond to IEA and UN data under the designation of "Vegetal Fuels". In the case of the European Union see below.

Primary heat (geothermal energy) is considered as being exclusively used for power generation. **Heat** shown in the final demand section is exclusively derived from other fuels (power generation and district heating). In the case of the European Union see below.

In the **World Summary Energy Balance, gross energy consumption** corresponds to the total primary energy consumed including quantities delivered to marine bunkers. **Total final energy consumption** (TFEC) does not include any quantities used for non-energy purposes.
Energy intensity is defined as the ratio of energy consumption to an economic activity indicator. In the case of total energy intensity, the ratio is between the Gross Inland Consumption and GDP.

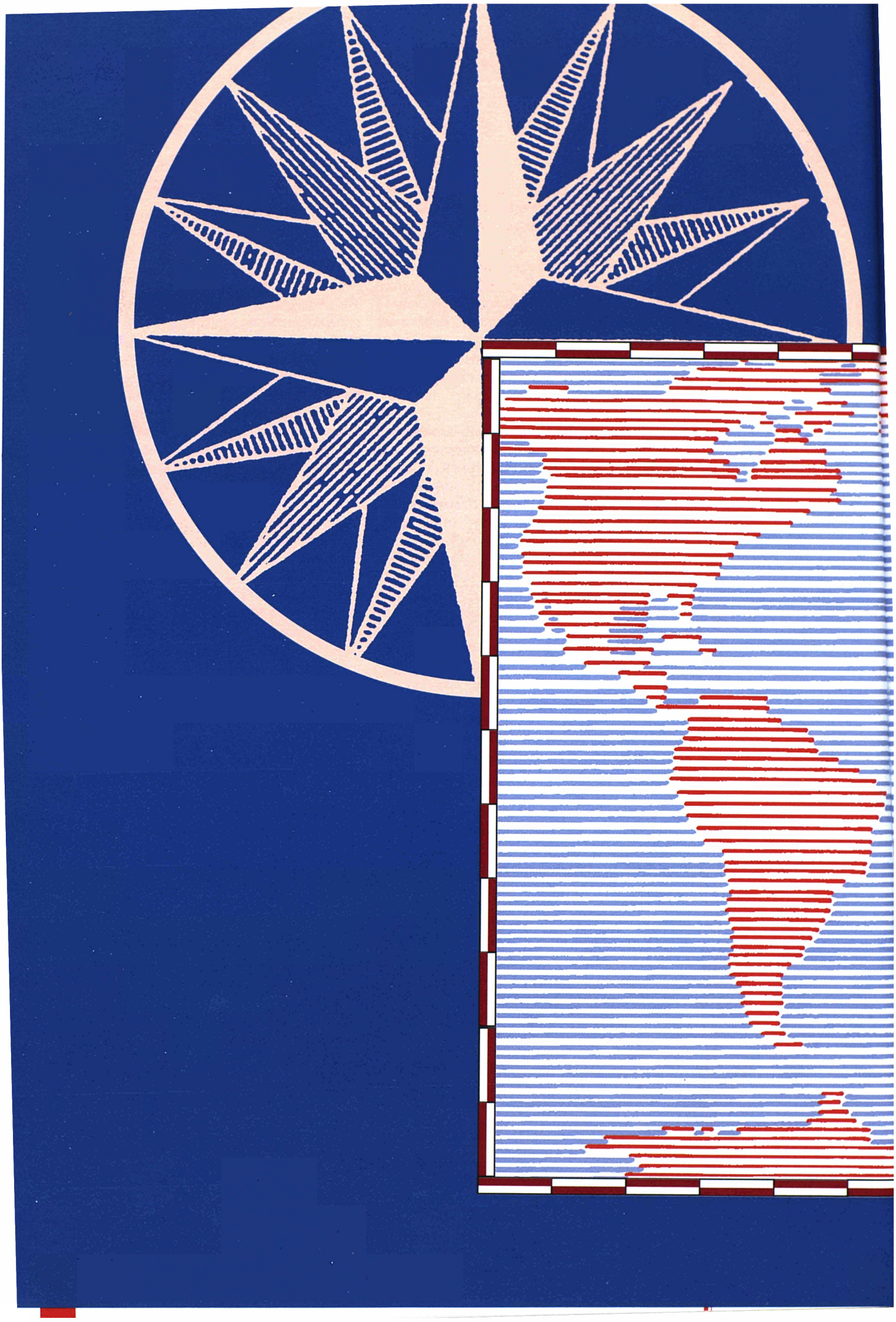
CO2 emissions are given only on an indicative basis and were calculated using common emission factors across all countries. At world level, CO2 emissions resulting from bunker fuels were included in the tables similarly to those resulting from fuels sold to airline transport.

EUROPEAN UNION

The SOEC energy balance for 1992 compared to previous years shows additional information on **renewable energy** sources (biomass, solar, wind and geothermal). However, to ensure consistency in the time series, the Summary Energy Balances in this Annual Energy Review were calculated according to the old methodology and thus show under "Other" and "Geothermal" only the quantities used for power generation. The volumes of renewable energy sources are indicated in a separate table.

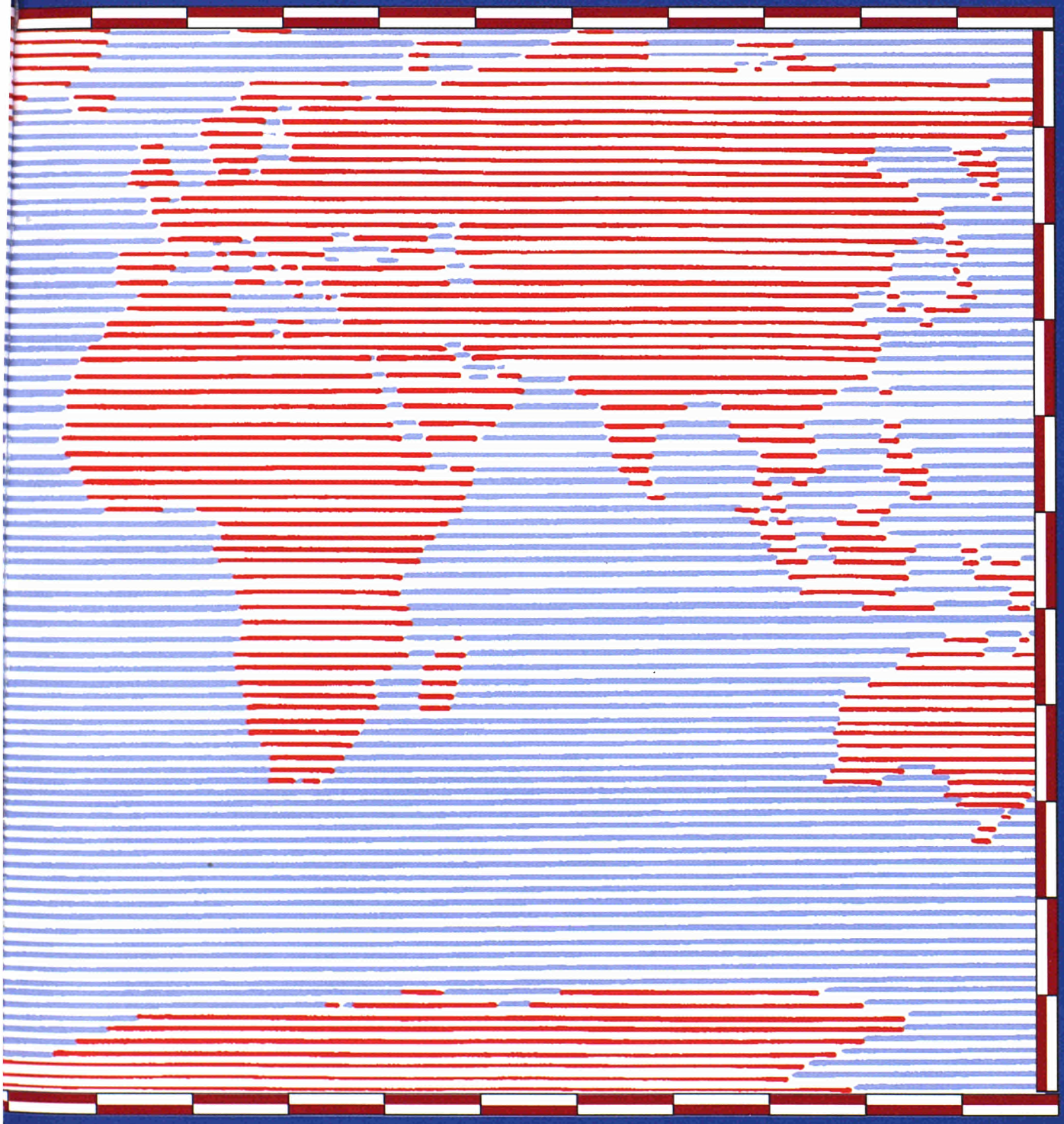
Data for **Germany** include both the former West Germany and the former German Democratic Republic.

More detailed definitions are shown in SOEC and IEA publications.

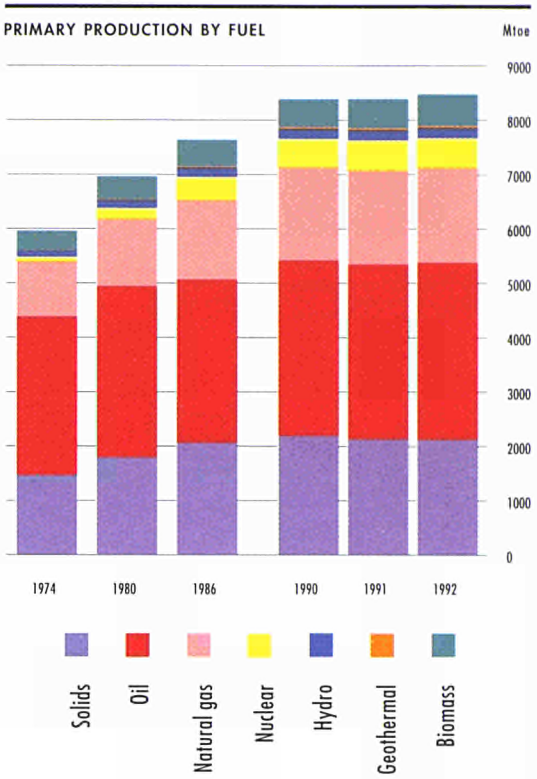


PART I

WORLD



Total **energy production** in the world as a whole (equivalent to gross energy consumption aside from some stock variations and statistical errors) increased from 1974 to 1992 by almost 2% per year. However, there was a slow down of this growth in the last two years (0% in 1991 and 1% in 1992). In 1992, oil was still the most important fuel with 38% of total (49% in 1974) but its production has grown slower than total energy (0.6% per year in the period). The second most important fuel is solids which kept a constant share of total of about one quarter. Natural gas ranks third in meeting world needs with 21% in 1992 and it has had a steady growth of 3% per year in the period. Renewable energy sources come fourth in satisfying world energy demand with almost 10% in 1992 (8% in 1974) and have had an annual average growth rate of almost 3%. Finally, nuclear energy grew the fastest in the period, mainly up to 1986 (16% per year); Its rate of growth slowed down between 1986 and 1991 (6% per year) and there was a small drop of 1.5% in 1992.



TOTAL PRIMARY ENERGY PRODUCTION: TOTAL BY REGION

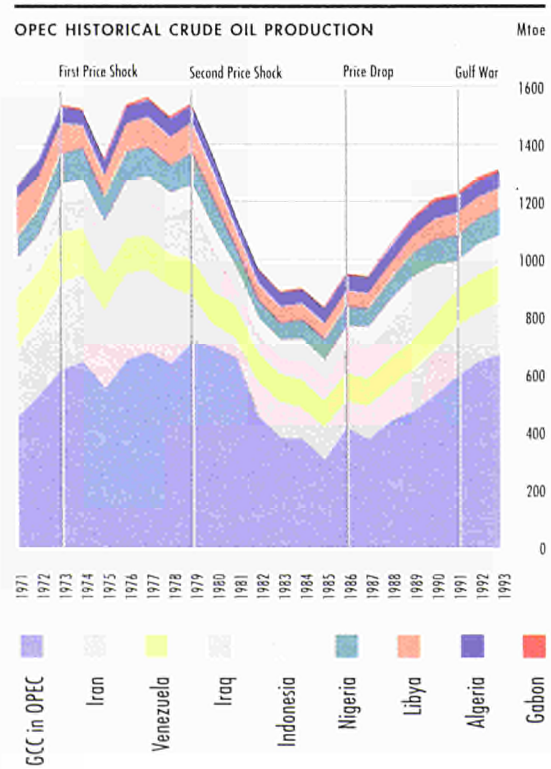
Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
WORLD	5971	6973	7648	8397	8400	8484	2.62	1.55	2.36	0.03	1.00	2.0
Western Europe	464	641	817	816	822	831	5.5	4.1	0.0	0.8	1.0	3.3
European Union	*429*	*547*	*682*	*636*	*631*	*625*	*4.2*	*3.7*	*-1.7*	*-0.8*	*-0.9*	*2.1*
EFTA	*36*	*94*	*135*	*179*	*191*	*205*	*17.5*	*6.3*	*7.3*	*6.6*	*7.4*	*10.2*
Central and Eastern Europe	227	270	289	230	220	203	3.0	1.1	-5.5	-4.7	-7.7	-0.6
Former USSR	1043	1358	1574	1625	1534	1423	4.5	2.5	0.8	-5.6	-7.3	1.7
NAFTA	1653	1895	1968	2118	2151	2155	2.3	0.6	1.9	1.5	0.2	1.5
OECD Pacific	102	135	209	238	252	258	4.7	7.6	3.4	5.6	2.5	5.3
Mediterranean	16	18	24	26	27	27	1.6	5.1	2.8	0.1	1.9	3.0
Africa	397	492	529	622	636	655	3.7	1.2	4.1	2.2	2.9	2.8
Middle East	1135	995	719	959	942	1031	-2.2	-5.3	7.4	-1.7	9.4	-0.5
Asia	612	858	1157	1354	1392	1472	5.8	5.1	4.0	2.8	5.8	5.0
Latin America	322	313	363	407	424	430	-0.5	2.5	2.9	4.1	1.3	1.6
For memo:												
OECD	*2186*	*2550*	*2840*	*3006*	*3051*	*3069*	*2.6*	*1.8*	*1.4*	*1.5*	*0.6*	*1.9*
Share in total (%)	*37*	*37*	*37*	*36*	*36*	*36*						
Non-OECD	*3785*	*4423*	*4808*	*5390*	*5349*	*5414*	*2.6*	*1.4*	*2.9*	*-0.8*	*1.2*	*2.0*
Share in total (%)	*63*	*63*	*63*	*64*	*64*	*64*						

In the 1974 to 1992 period, OECD and non-OECD areas had approximately the same growth in total energy production (2% per year). But evolution was different in time. While between 1986 and 1990 the non-OECD world increased its production about twice as fast as did the OECD, it had a drop of almost 1% in 1991 compared to an increase of 1.5% in the OECD. Apart from developments in the former USSR and in Central and Eastern Europe, there were changes in energy production in the Middle East and also Asia, which determined the main developments in the non-OECD area.

In 1992, energy production continued to fall in Central and Eastern Europe and in the former USSR. On the other hand, production in the Middle East increased sharply by almost 10%. The European Union in 1992, although more slowly than in the late 1980s, confirmed a downward trend in its domestic production. In fact, the European Union, along with Central and Eastern Europe and the former USSR, share the distinction of being the only world regions where production in 1992 was lower than in 1986. Within the non-OECD area the main energy producers are: Asia and the former USSR each accounting for 17% of total world production, and the Middle East with 12%.

Oil remains the dominant fuel in world production and consumption, although as stated above it has lost share in total energy production. OPEC is a major oil producer, but its weight in total world oil production fell from 49% in 1974 to 37% in 1992. Within OPEC, GCC countries' production share of total has been relatively stable in the whole period accounting for almost half, except in the 1979 to 1982 period (almost 60%) and during the Gulf war when it accounted for 55% of total OPEC. In the case of Iran, it is clear that oil production dropped significantly after the 1978-79 revolution and it has not yet recovered to pre-revolution levels. Besides Iraq, production in all other OPEC members has been relatively stable. The figure below shows the evolution of OPEC crude production since 1971.

OPEC HISTORICAL CRUDE OIL PRODUCTION



Looking at total **gross inland energy consumption** by region, the developments in the period are characterised by a faster growth in the non-OECD area (3.2% per year against 1.1% per year in the OECD). However, in 1991 and 1992, while the OECD area continued to increase its energy needs, the non-OECD world had a slight drop in demand. This drop in the non-OECD demand resulted from the significant decreases in Central and Eastern Europe and the former USSR, and, in 1991, also because of the drop in the Middle East.

In 1992, there was a general slow down in the growth of world energy demand. This was the results of a slight increase in OECD and a small decrease in the non-OECD world. The increase in OECD demand itself was the result of a drop in Western Europe which was more than made up by increases in North America and the OECD Pacific. On the other hand, the drop in non-OECD continues to be the result of recession in Central and Eastern Europe and in the former USSR, which more than compensated for an acceleration of energy demand in Africa, Middle East and Asia.

TOTAL GROSS INLAND ENERGY CONSUMPTION: TOTAL BY REGION

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
WORLD *(1)*	5860	6896	7587	8316	8380	8393	2.8	1.6	2.3	0.8	0.1	2.0
Bunkers	122	109	97	124	125	128	-1.9	-2.0	6.3	1.5	1.7	0.2
Western Europe	1168	1253	1286	1347	1366	1355	1.2	0.4	1.2	1.4	-0.8	0.8
European Union	*1055*	*1123*	*1139*	*1197*	*1213*	*1207*	*1.1*	*0.2*	*1.3*	*1.3*	*-0.5*	*0.8*
EFTA	*114*	*130*	*147*	*149*	*153*	*149*	*2.3*	*2.1*	*0.3*	*2.7*	*-3.2*	*1.5*
Central and Eastern Europe	275	358	383	332	298	277	4.5	1.1	-3.5	-10.2	-7.1	0.0
Former USSR	908	1132	1294	1357	1333	1219	3.7	2.3	1.2	-1.8	-8.5	1.6
NAFTA	1890	2087	2074	2256	2301	2333	1.7	-0.1	2.1	2.0	1.4	1.2
OECD Pacific	394	426	453	535	548	554	1.3	1.0	4.3	2.4	1.3	1.9
Mediterranean	26	33	44	55	56	58	4.0	4.8	5.8	1.5	3.1	4.5
Africa	162	222	289	326	328	337	5.4	4.5	3.1	0.8	2.6	4.2
Middle East	69	129	210	246	234	249	11.0	8.5	4.0	-4.9	6.3	7.4
Asia	613	868	1150	1408	1457	1547	6.0	4.8	5.2	3.5	6.2	5.3
Latin America	233	279	308	332	334	336	3.1	1.7	1.9	0.8	0.6	2.1
For memo:												
OECD	*3426*	*3707*	*3750*	*4066*	*4138*	*4165*	*1.3*	*0.2*	*2.0*	*1.8*	*0.7*	*1.1*
Share in total (%)	*60*	*55*	*50*	*50*	*50*	*50*						
Non-OECD	*2312*	*3080*	*3741*	*4127*	*4117*	*4100*	*4.9*	*3.3*	*2.5*	*-0.2*	*-0.4*	*3.2*
Share in total (%)	*40*	*45*	*50*	*50*	*50*	*50*						

(1) Gross energy consumption.

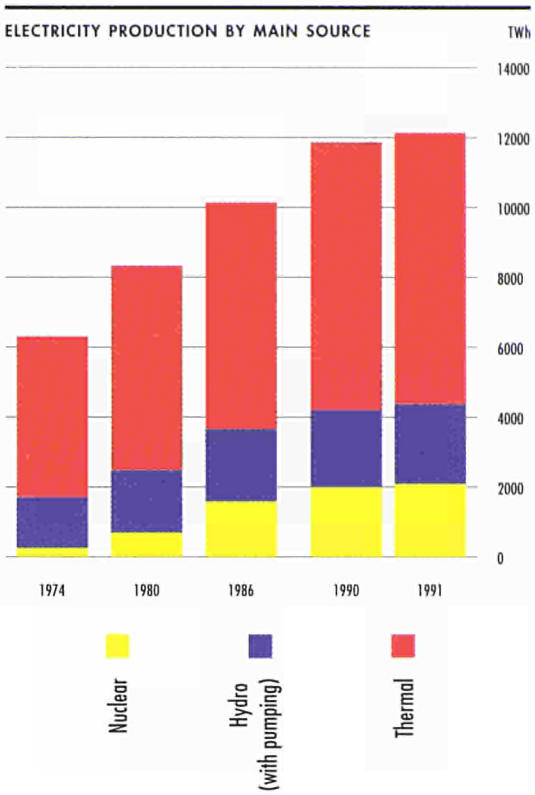
The world **energy trade** (net energy imports) shows that the European Union is by far the largest net importer and with a steady annual growth of 4% per year since 1986. However, the volume of European Union imports in 1992 was still 7% below the 1974 peak. OECD Pacific is the second ranking, world region in terms of net energy imports with a relatively stable level since 1980, except for the drop in mid-1980s. The NAFTA region is also an important importer. The evolution of its energy imports follow a similar profile to that of the European Union, although with a faster growth rate since 1986 (6% per year). EFTA, which had been net importer until mid-1980s, is now a net exporter and growing by more than 45% per year since 1990. This development is mainly due to increases in exports of natural gas from Norway.

Within the non-OECD area, only Central and Eastern Europe and Asia are net importers of energy. The Middle East area is by far the largest energy exporter in the world, but its evolution is determined by crude oil exports. The African continent ranks second and shows a steady increase in the period of almost 2% per year. The former USSR ranks third, but has decreased its net exports since 1990 by about 13% per year.

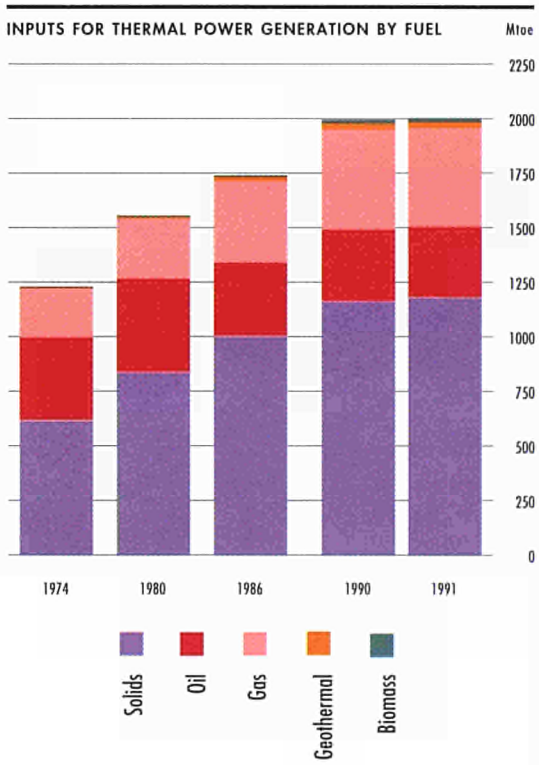
NET ENERGY IMPORTS: TOTAL BY REGION

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Western Europe	759	667	516	566	578	574	-2.1	-4.2	2.3	2.1	-0.6	-1.5
European Union	*675*	*625*	*499*	*592*	*617*	*630*	*-1.3*	*-3.7*	*4.3*	*4.3*	*2.1*	*-0.4*
EFTA	*84*	*42*	*17*	*-26*	*-39*	*-55*	*-10.9*	*-14.0*	-	*51.6*	*41.0*	-
Central and Eastern Europe	30	91	89	95	79	73	20.1	-0.4	1.5	-16.9	-7.1	5.0
Former USSR	-125	-212	-250	-251	-189	-192	9.2	2.8	0.1	-24.8	2.0	2.4
NAFTA	258	244	139	211	174	201	-0.9	-9.0	11.1	-17.8	16.0	-1.4
OECD Pacific	317	306	255	307	304	302	-0.6	-3.0	4.8	-1.0	-0.6	-0.3
Mediterranean	11	16	21	30	28	31	6.0	4.8	9.7	-6.5	8.3	5.8
Africa	-227	-264	-231	-289	-303	-318	2.5	-2.2	5.8	4.7	5.1	1.9
Middle East	-1041	-854	-501	-701	-693	-749	-3.3	-8.5	8.7	-1.1	8.1	-1.8
Asia	13	21	13	90	99	131	8.6	-7.0	60.6	10.3	32.8	13.9
Latin America	-77	-26	-47	-67	-82	-77	-16.7	10.4	9.4	23.1	-6.5	0.0
For memo:												
OECD	*1341*	*1277*	*1000*	*1179*	*1151*	*1172*	*-0.8*	*-4.0*	*4.2*	*-2.4*	*1.9*	*-0.7*

Electricity generation has shown a world-wide sustained increase of 4% per year between 1974 and 1991. Thermal production continues to dominate total electricity generation, although its share decreased from 73% in 1974 to 64% in 1991. Nuclear showed a strong growth to 1990 of 13% per year on average, to attain almost the same share in total as hydro power. After 1990, the growth in nuclear output has slowed down considerably due to lack of investments mainly in Western Europe and North America. Hydro power, which grew to 1990 by almost 3% per year, has had only modest increases in the beginning of the 1990s.

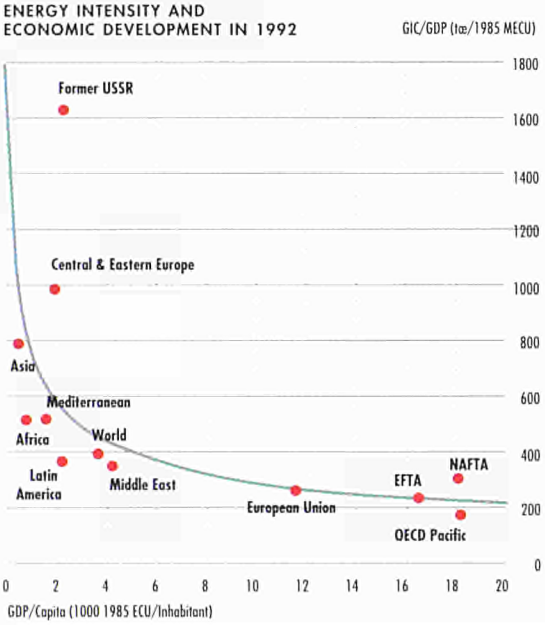


Inputs for electricity generation have been increasingly dominated by solid fuels. While these represented 50% of total inputs in 1974, they were 59% in 1991. Oil use for generation of electricity has seen a steadily decreasing trend (2.6% per year) since the 1980 peak. The utilisation of gas as an input for power generation underwent continuous growth in the period (4% per year). From 1986, gas became more important than oil. Renewable energy sources (geothermal and biomass), although with a small share of total inputs, had a very strong and steady growth from 1974 to 1991 of about 10% per year. In 1991, the shares of the different fuel inputs were: Solids (59%); Gas (23%); Oil (16%); and Renewable sources (2%).



Two of the **main energy indicators** are energy consumption per capita and energy intensity. However, a word of caution is necessary. While consumption per capita is to a large extent related to wealth and living standards, the comparison between different regions can be misleading. In fact, the same ratio in two regions does not necessarily imply the same life style or stage of economic development. Different economic structures combined with diverse types of technology being applied, especially in terms of energy-using equipment, typically result in different levels of energy intensity, even if the consumption per capita is the same. Comparing the energy intensity with the GDP per capita for each region in 1992, there seems to be a relation between lower economic development and high energy intensity and vice-versa. In fact, it seems that those countries, formerly called Centrally Planned Economies, constitute a group with relatively low income and high energy intensity, and separate from all other world regions. Most of the economic development of these countries was based on energy-intensive industries with low-efficiency energy equipment in all other sectors. Latin America, on the other hand, has an intensity about the same as in the NAFTA region, but the income is significantly lower. the implicit significantly lower energy consumption per capita is in part due to mild climatic conditions, not requiring much energy use for the domestic sector. The curve shown below is an attempt to correlate energy intensity and income per capita. The conclusion in general is that countries at a low stage of development will tend to decrease their intensity from high levels as income increases. At the other extreme, countries at a high stage of economic development, which have already gained a lot in terms of energy efficiency, tend to stabilise their intensities due to the demands of very high living standards. For illustration, the GDP per capita and region is shown in the table below.

ENERGY INTENSITY AND ECONOMIC DEVELOPMENT IN 1992



GROSS DOMESTIC PRODUCT PER CAPITA: TOTAL BY REGION

thousand 1985 ECU/inhabitant	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
WORLD	na	na	3.36	3.59	3.53	3.54	na	na	1.7	-1.8	0.4	na
Western Europe	8.82	9.94	10.86	12.05	12.10	12.15	2.0	1.5	2.6	0.4	0.5	1.8
European Union	*8.46*	*9.56*	*10.40*	*11.58*	*11.64*	*11.72*	*2.0*	*1.4*	*2.7*	*0.6*	*0.7*	*1.8*
EFTA	*12.60*	*14.09*	*15.81*	*17.08*	*16.84*	*16.67*	*1.9*	*1.9*	*1.9*	*-1.4*	*-1.0*	*1.6*
Central and Eastern Europe	na	2.68	2.90	2.61	2.30	2.12	na	1.3	-2.5	-12.1	-7.8	na
Former USSR	na	2.74	3.22	3.38	3.08	2.50	na	2.7	1.2	-9.0	-18.8	na
NAFTA	14.83	15.92	17.36	18.48	18.02	18.26	1.2	1.5	1.6	-2.5	1.3	1.2
OECD Pacific	7.23	11.39	14.66	17.31	17.89	18.35	7.9	4.3	4.2	3.3	2.6	5.3
Mediterranean	1.10	1.29	1.53	1.73	1.70	1.74	2.7	2.8	3.2	-1.8	2.6	2.6
Africa	na	na	0.94	0.95	0.93	0.91	na	na	0.1	-2.0	-2.2	na
Middle East	6.03	5.68	4.76	4.72	4.49	4.40	-1.0	-2.9	-0.2	-4.9	-2.2	-1.7
Asia	0.24	0.32	0.49	0.61	0.62	0.65	5.3	7.3	5.4	3.1	3.4	5.8
Latin America	2.16	2.52	2.34	2.28	2.31	2.38	2.6	-1.2	-0.6	1.1	3.1	0.5

Comparing **energy consumption per capita** in 1992 across regions, it is clear that NAFTA shows by far the highest ratio (almost four times the world average), although the inclusion of Mexico diminishes this indicator to some extent. At the other extreme, Africa and Asia have the lowest levels, significantly under the world average (two thirds below). EFTA and the former USSR rank second and third respectively, but in the case of the latter this is due to very inefficient use of energy (very high intensity). OECD Pacific and the European Union come after these three regions with per capita consumptions slightly more than double the world average.

GROSS INLAND ENERGY CONSUMPTION PER CAPITA: TOTAL BY REGION

toe/inhabitant	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
WORLD *(1)*	1.51	1.59	1.54	1.58	1.56	1.54	0.9	-0.5	0.6	-1.3	-1.1	0.1
Western Europe	3.27	3.43	3.47	3.58	3.62	3.57	0.8	0.2	0.8	1.0	-1.3	0.5
European Union	*3.23*	*3.36*	*3.36*	*3.49*	*3.51*	*3.48*	*0.7*	*0.0*	*0.9*	*0.8*	*-0.9*	*0.4*
EFTA	*3.67*	*4.16*	*4.64*	*4.59*	*4.68*	*4.49*	*2.1*	*1.8*	*-0.3*	*1.9*	*-4.0*	*1.1*
Central and Eastern Europe	2.45	3.05	3.15	2.69	2.41	2.25	3.7	0.6	-3.9	-10.3	-6.7	-0.5
Former USSR	3.60	4.26	4.62	4.69	4.58	4.17	2.9	1.3	0.4	-2.3	-9.0	0.8
NAFTA	6.38	6.48	5.97	6.18	6.22	6.19	0.3	-1.3	0.9	0.6	-0.3	-0.2
OECD Pacific	3.10	3.17	3.22	3.71	3.79	3.82	0.3	0.3	3.7	2.0	0.8	1.2
Mediterranean	0.66	0.73	0.84	0.97	0.96	0.97	1.8	2.4	3.5	-0.8	0.7	2.2
Africa	0.43	0.47	0.51	0.52	0.50	0.52	1.4	1.7	0.2	-2.7	2.9	1.1
Middle East	0.87	1.32	1.74	1.79	1.63	1.69	7.3	4.8	0.7	-8.9	3.7	3.8
Asia	0.31	0.39	0.44	0.51	0.51	0.53	4.0	2.0	3.4	1.2	4.4	3.1
Latin America	0.91	0.95	0.93	0.92	0.91	0.90	0.8	-0.5	-0.2	-0.9	-1.2	-0.1

(1) Calculated on the basis of gross energy consumption.

Total world average **energy intensity** shows a slight downward trend over time. OECD Pacific has the lowest intensity combined with the largest improvement in the period (almost 4% per year). Western Europe has the second lowest ratio but, although it has improved in the period, the average annual rate of gains (1.3%) is lower than that of OECD Pacific. NAFTA had the same annual average gain in the period (1.3%), but it had a 16% higher level than Western Europe in 1992. the highest levels are evident in Central and Eastern Europe and in the former USSR. In these countries however, intensity decreased in the 1980s, but is recently increasing significantly, particularly in the former USSR. These increases are mainly due to the serious economic crisis. Within the non-OECD regions, only Asia and Latin America decreased their intensities in the period. The Middle East shows a strong increase until 1986 and some stability thereafter. Energy intensity in Africa was stable in the 1980s with some increase in 1992.

ENERGY INTENSITY: TOTAL BY REGION

toe/1985 MECU	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
WORLD *(1)*	na	na	457	438	440	431	na	na	-1.06	0.48	-1.97	na
Western Europe	371	345	319	296	298	292	-1.2	-1.3	-1.9	0.6	-2.1	-1.3
European Union	*381*	*352*	*323*	*301*	*302*	*297*	*-1.3*	*-1.4*	*-1.8*	*0.3*	*-1.6*	*-1.4*
EFTA	*289*	*294*	*293*	*269*	*278*	*269*	*0.3*	*0.0*	*-2.2*	*3.3*	*-3.0*	*-0.4*
Central and Eastern Europe	na	1139	1088	1028	1049	1062	na	-0.8	-1.4	2.0	1.2	na
Former USSR	na	1553	1435	1387	1489	1668	na	-1.3	-0.8	7.4	12.1	na
NAFTA	430	407	344	334	345	339	-0.9	-2.8	-0.7	3.2	-1.6	-1.3
OECD Pacific	429	278	219	215	212	208	-7.0	-3.9	-0.6	-1.3	-1.7	-3.9
Mediterranean	598	567	552	560	566	555	-0.9	-0.4	0.4	1.0	-1.9	-0.4
Africa	na	na	544	545	541	552	na	na	0.0	-0.7	2.0	na
Middle East	143	232	366	380	364	386	8.3	7.9	0.9	-4.2	6.0	5.6
Asia	1315	1221	902	834	819	826	-1.2	-4.9	-1.9	-1.9	0.9	-2.5
Latin America	422	389	404	416	408	402	-1.4	0.7	0.7	-1.9	-1.5	-0.3

(1) Intensity calculated on the basis of the gross energy consumption.

World-wide **emissions of CO2** increased steadily by almost 2% per year until 1990 and stabilised in 1991. The overall increase was mainly due to emissions from the non-OECD countries which increased by over 3% per year. In 1991, non-OECD emissions accounted for 49% of world emissions (38% in 1974).

The following tables show CO2 emissions and summary energy balance for the World.

CO2 EMISSIONS *(1)*: TOTAL BY REGION

Mt of CO2	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	91/74
							Annual % Change				
WORLD	15606	17944	19143	20791	20784	na	2.4	1.1	2.1	0.0	1.6
Western Europe	3416	3504	3289	3367	3422	3365	0.4	-1.0	0.6	1.6	0.0
European Union	*3159*	*3231*	*3030*	*3105*	*3156*	*3104*	*0.4*	*-1.1*	*0.6*	*1.6*	*0.0*
EFTA	*257*	*273*	*259*	*262*	*267*	*261*	*1.0*	*-0.9*	*0.3*	*1.7*	*0.2*
Central and Eastern Europe	806	1000	1041	893	806	na	na	0.7	-3.8	-9.8	0.0
Former USSR	2645	3233	3471	3551	3459	na	na	1.2	0.6	-2.6	1.5
NAFTA	5146	5461	5384	5803	5751	5845	1.0	-0.2	1.9	-0.9	0.6
OECD Pacific	1128	1137	1157	1366	1390	1410	0.1	0.3	4.2	1.8	1.2
Mediterranean	72	91	124	153	157	163	4.0	5.3	5.4	2.0	4.4
Africa	281	398	502	602	609	na	na	na	4.6	1.3	4.4
Middle East	165	329	545	643	628	na	12.1	8.8	4.2	-2.3	7.7
Asia	1536	2264	3060	3800	3928	na	6.7	5.1	5.6	3.4	5.4
Latin America	412	527	569	613	634	647	4.2	1.3	1.9	3.4	2.4

(1) In this table emissions from each region include those resulting from bunker fuels..

CO2 EMISSIONS: SHARE BY REGION

%	1974	1980	1986	1990	1991
Western Europe	21.9	19.5	17.2	16.2	16.5
European Union	*20.2*	*18.0*	*15.8*	*14.9*	*15.2*
EFTA	*1.6*	*1.5*	*1.4*	*1.3*	*1.3*
Central and Eastern Europe	5.2	5.6	5.4	4.3	3.9
Former USSR	16.9	18.0	18.1	17.1	16.6
NAFTA	33.0	30.4	28.1	27.9	27.7
OECD Pacific	7.2	6.3	6.0	6.6	6.7
Mediterranean	0.5	0.5	0.6	0.7	0.8
Africa	1.8	2.2	2.6	2.9	2.9
Middle East	1.1	1.8	2.8	3.1	3.0
Asia	9.8	12.6	16.0	18.3	18.9
Latin America	2.6	2.9	3.0	2.9	3.0

WORLD: SUMMARY ENERGY BALANCE

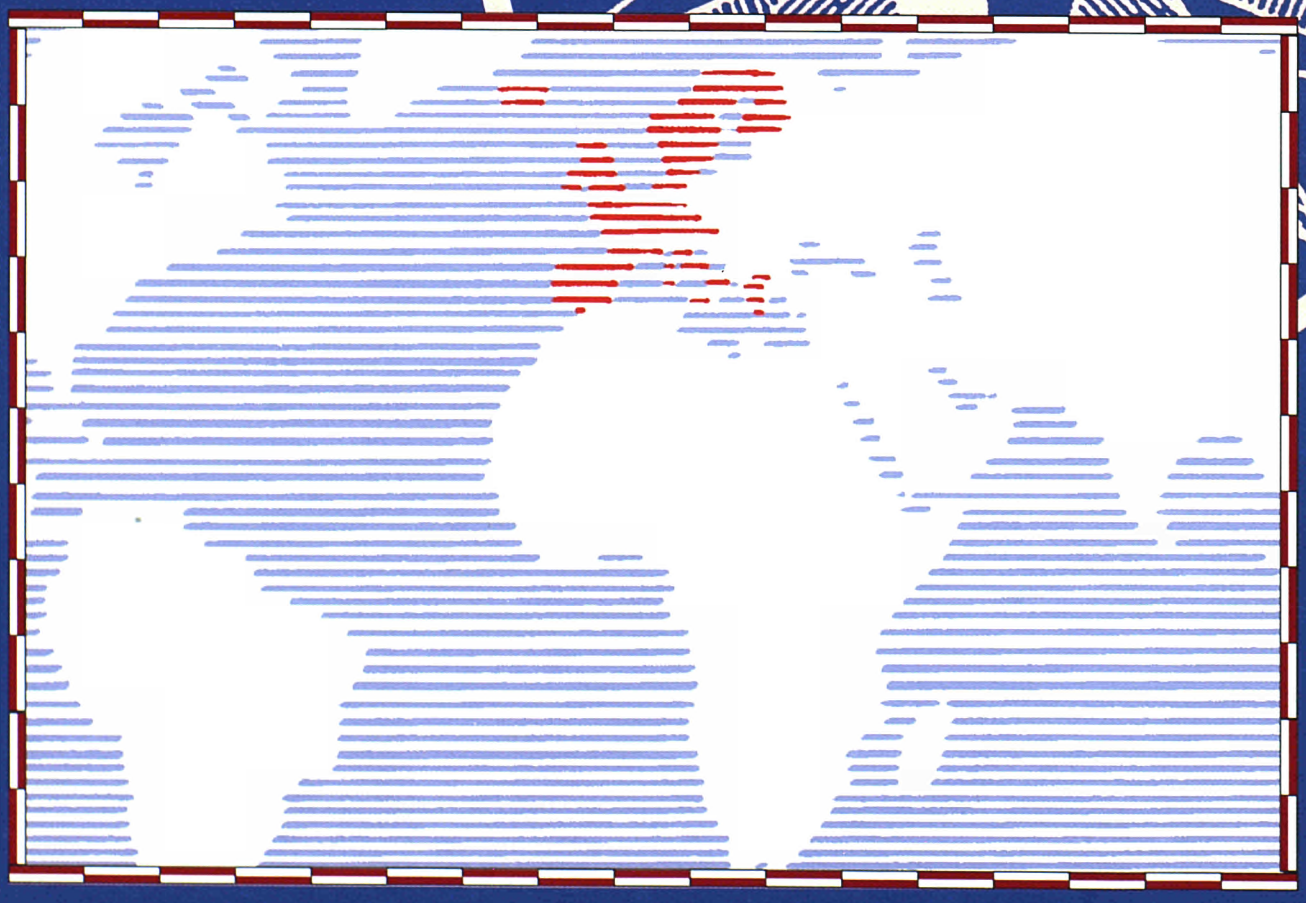
Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	5971	6973	7648	8397	8400	8484	2.6	1.6	2.4	0.0	1.0
Solids	1484	1806	2076	2202	2142	2136	3.3	2.3	1.5	-2.7	-0.3
Oil	2912	3147	2997	3229	3213	3255	1.3	-0.8	1.9	-0.5	1.3
Natural gas	1012	1237	1466	1711	1732	1745	3.4	2.9	3.9	1.2	0.8
Nuclear	73	192	416	514	541	533	17.3	13.8	5.5	5.1	-1.5
Hydro	125	153	177	188	195	195	3.4	2.5	1.6	3.6	-0.2
Geothermal	6	11	22	30	31	32	10.9	11.8	8.5	3.4	1.4
Biomass	359	428	495	521	545	589	3.0	2.5	1.3	4.7	8.0
Net Imports *(1)*	-82	-11	5	-8	-5	-23	-	-	-	-	-
Solids	13	7	9	6	13	8	-	-	-	-	-
Oil	-96	-20	3	-15	-19	-36	-	-	-	-	-
Crude oil	*-81*	*9*	*56*	*35*	*31*	*19*	-	-	-	-	-
Oil products	*-14*	*-29*	*-54*	*-50*	*-50*	*-55*	-	-	-	-	-
Natural gas	1	1	-6	1	1	5	-	-	-	-	-
Electricity	0	0	0	0	0	1	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Consumption	5860	6896	7587	8316	8380	8393	2.8	1.6	2.3	0.8	0.1
Solids	1515	1795	2063	2186	2141	2136	2.9	2.3	1.5	-2.0	-0.2
Oil	2773	3090	2974	3189	3195	3198	1.8	-0.6	1.8	0.2	0.1
Natural gas	1009	1234	1444	1685	1730	1736	3.4	2.7	3.9	2.7	0.4
Other *(2)*	563	778	1107	1258	1314	1323	5.6	6.0	3.2	4.5	0.7
Electricity Generation in TWh	6315	8341	10148	11871	12141	na	4.7	3.3	4.0	2.3	na
Nuclear	273	713	1601	2013	2106	2074	17.4	14.4	5.9	4.6	-1.5
Hydro	1458	1784	2073	2204	2286	2281	3.4	2.5	1.5	3.7	-0.2
Thermal	4585	5843	6474	7654	7749	na	4.1	1.7	4.3	1.2	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	1232	1559	1744	1999	2007	na	4.0	1.9	3.5	0.4	na
Solids	619	839	1005	1165	1183	na	5.2	3.1	3.8	1.6	na
Oil	377	428	335	327	322	na	2.1	-4.0	-0.6	-1.7	na
Gas	226	275	375	459	452	na	3.3	5.3	5.2	-1.5	na
Geothermal	6	11	22	30	31	na	11.6	11.8	8.5	2.2	na
Biomass	4	6	7	17	19	na	5.4	2.5	25.3	12.0	na
Average Thermal Efficiency in %	32.0	32.2	31.9	32.9	33.2	na	0.1	-0.2	0.8	0.8	na
Non-Energy Uses	187	226	227	244	238	na	3.2	0.0	1.8	-2.3	na
Total Final Energy Demand	4260	4892	5295	5702	5701	na	2.3	1.3	1.9	0.0	na
Solids	753	804	872	862	812	na	1.1	1.4	-0.3	-5.8	na
Oil	1921	2134	2150	2314	2334	na	1.8	0.1	1.9	0.9	na
Gas	683	813	880	1001	1036	na	3.0	1.3	3.3	3.5	na
Electricity	454	588	718	832	858	na	4.4	3.4	3.8	3.1	na
Heat	94	131	189	190	164	na	5.6	6.3	0.2	-13.8	na
Biomass	354	421	486	502	497	na	2.9	2.4	0.8	-1.1	na
CO2 Emissions in Mt of CO2	15606	17944	19143	20791	20784	na	2.4	1.1	2.1	0.0	na
Indicators											
Population (Million)	3874	4330	4923	5265	5373	5443	1.9	2.2	1.7	2.1	1.3
GDP (Index 1985 = 100)	na	na	102.8	117.6	118.0	120.5	na	na	3.4	0.3	2.2
Gross Consumption/GDP (toe/1985 MECU)	na	na	457	438	440	431	na	na	-1.1	0.5	-2.0
Gross Consumption/Capita (toe/inhabitant)	1.51	1.59	1.54	1.58	1.56	1.54	0.9	-0.5	0.6	-1.3	-1.1
Electricity Generated/Capita (kWh/inhabitant)	1630	1926	2061	2255	2259	na	2.8	1.1	2.3	0.2	na
CO2 Emissions/Capita (t of CO2/inhabitant)	4.03	4.14	3.89	3.95	3.87	na	0.5	-1.1	0.4	-2.0	na

(1) Corresponds to statistical errors.

(2) Includes nuclear, hydro and wind, and other renewable energy sources.

PART II

WESTERN EUROPE



WESTERN EUROPE

EUROPEAN UNION[1]

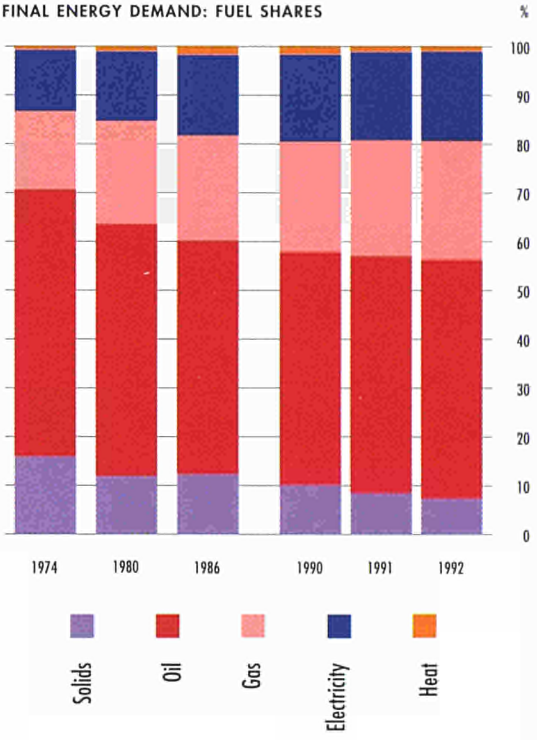
[1] *To avoid a break in the time series, the analysis on the European Union includes all data regarding the former German Democratic Republic*

FINAL ENERGY CONSUMPTION

The volume of energy consumed in final demand sectors is a function, among other variables, of economic activity to a large extent. In global terms and since 1974, the Gross Domestic Product of the European Union had its fastest growth rate in the period from 1986 to 1990 (3.1% per year). Since then, GDP growth has been marked by a slow down to 1.0% in 1991 and 1.1% in 1992 and by a recession in 1993 of 0.4%. The 1991 and 1992 slow down has been approximately similar in all Member States, except in the United Kingdom (-2.2% in 1991 and 0.5% in 1992) and the Netherlands with -1.8% in 1992. Current estimates for 1993, indicate that Ireland, after a drop of 0.5% in 1992 recovers its growth to 2.0%. In addition, Ireland presents the fastest economic growth in the whole period (almost double in 1992 compared to 1974). Luxembourg and the United Kingdom have also recovered from the crisis in 1993 with GDP growth rates of 0.7% and 1.9% respectively. Denmark's GDP stagnated in 1993. For all other Member States there is a general drop in activity in 1993: -1.6% for Belgium; -1.3% for Germany; -0.9% for France and Spain; 0.5% for Portugal; -0.3% for Italyand the Netherlands; and -0.2% for Greece.

Total **final energy consumption** in the European Union as a whole increased steadily between 1974 and 1991 by about 0.6% per year on average. In this period, solid fuels' demand fell some 42%, and oil consumption fluctuated around a slight decreasing trend. All other fuels contributed to the overall growth, with gas and electricity demand showing increments of 63% and 59% respectively. These developments result from a switching away from solid fuels and to lesser extent, oil, in both Industry and the Domestic and Tertiary sectors. Looking at recent developments, final energy demand increased by 1.5% in 1991 mainly due to colder weather while it fell in 1992 by 0.2% because of warmer weather and slow economic growth. In 1993, despite colder weather, the economic recession (-0.4% GDP growth) led to a drop in energy demand of about 1%.

FINAL ENERGY DEMAND: FUEL SHARES



INDICES OF GROSS DOMESTIC PRODUCT (1985 = 100)

	1974	1980	1986	1990	1991	1992	1993	80/74	86/80	90/86	91/90	92/91	93/92
								Annual % Change					
Belgium	84.1	96.2	101.5	116.7	118.9	120.5	118.5	2.3	0.9	3.6	1.9	1.3	-1.6
Denmark	78.0	87.8	103.6	107.9	109.2	111.6	111.6	2.0	2.8	1.0	1.2	2.2	0.0
France	79.6	92.8	102.4	115.7	117.1	119.1	118.0	2.6	1.7	3.1	1.1	1.7	-0.9
Germany	81.8	94.7	102.2	114.0	116.4	117.6	116.1	2.5	1.3	2.8	2.1	1.1	-1.3
Greece	71.3	93.6	101.6	108.6	110.6	112.7	112.5	4.6	1.4	1.7	1.8	1.9	-0.2
Ireland	66.8	88.2	99.6	126.5	129.7	129.0	131.6	4.7	2.0	6.2	2.5	-0.5	2.0
Italy	76.0	93.3	102.9	116.2	117.9	119.4	119.1	3.5	1.7	3.1	1.4	1.3	-0.3
Luxembourg	84.5	88.3	104.8	125.5	129.3	130.9	131.8	0.7	2.9	4.6	3.1	1.2	0.7
Netherlands	83.7	95.2	102.0	114.7	117.3	115.2	114.8	2.2	1.2	3.0	2.2	-1.8	-0.3
Portugal	77.1	95.7	104.1	125.0	127.7	130.2	129.5	3.7	1.4	4.7	2.1	2.0	-0.5
Spain	84.4	92.7	103.2	124.5	127.4	130.7	129.5	1.6	1.8	4.8	2.3	2.6	-0.9
United Kingdom	83.3	90.5	104.1	116.9	114.3	114.8	117.0	1.4	2.4	2.9	-2.2	0.5	1.9
EUROPEAN UNION	**80.6**	**93.1**	**102.7**	**116.0**	**117.2**	**118.5**	**118.0**	**2.4**	**1.7**	**3.1**	**1.0**	**1.1**	**-0.4**

INDUSTRY

Energy consumption in Industry shows a decreasing trend from 1974 to 1991. In 1992 it increased by 0.6%. This evolution corresponds to significant improvements in the energy intensity of the sector given that overall industrial activity increased steadily until 1990. In 1991 and despite a slight fall in activity, energy intensity continued to improve although more slowly. In 1992, however, there was a reverse in these trends and the sector lost some economic efficiency in the use of energy as intensity increased.

The analysis of the energy intensity ratio over the 1974 to 1992 period is complex. Not only do technological improvements play a role but also changing structures have a significant impact. Indeed, after the second oil price shock the restructuring of European industry was accelerated away from energy-intensive branches, such as iron & steel, chemicals and non-metallic minerals. Energy consumption in these three branches in 1992 compared to 1974 decreased by 41%, 17% and 25% respectively.

In terms of fuel mix there were significant changes. Although solid fuels have partly replaced oil in the non-metallic minerals branch (there were significant efficiency gains due to change of process), they lost share in the total due to the drop in iron & steel and chemicals. Also due to process changes, solid fuels have been partly replaced by electricity. Oil demand has dropped (in line with post-1974 policy) due to loss of activity in energy-intensive branches and to efficiency gains. While there was a slow penetration of gas in the industrial market (0.9% per year on average), electricity demand in the sector grew at an annual average of 1.6%. Overall, the resulting share of each fuel changed over the period as follows: Solids 22% to 18%; Oil 39% to 19%; Gas 22% to 35%; and Electricity 16% to 27%.

FINAL ENERGY CONSUMPTION

EUROPEAN UNION	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
Mtoe							Annual % Change				
Industry	295.45	269.72	232.88	236.79	224.94	226.36	-1.5	-2.4	0.4	-5.0	0.6
of which											
Iron & Steel	83.89	64.42	52.92	52.23	49.54	49.13	-4.3	-3.2	-0.3	-5.2	-0.8
Chemical	53.85	47.49	45.56	49.01	41.82	44.73	-2.1	-0.7	1.8	-14.7	7.0
Non-metallic minerals	39.43	37.17	29.67	32.23	32.45	29.70	-1.0	-3.7	2.1	0.7	-8.5
Other	118.28	120.64	104.74	103.33	101.13	102.80	0.3	-2.3	-0.3	-2.1	1.6
Solids	64.79	52.77	55.37	51.36	44.82	41.57	-3.4	0.8	-1.9	-12.7	-7.2
of which											
Iron & Steel	36.04	27.59	24.13	24.17	22.64	20.47	-4.4	-2.2	0.0	-6.3	-9.6
Chemical	7.27	5.76	6.87	6.86	4.42	4.62	-3.8	3.0	0.0	-35.5	4.5
Non-metallic minerals	4.85	5.95	8.62	8.69	8.86	8.55	3.5	6.4	0.2	1.9	-3.5
Oil	115.96	94.02	53.06	44.88	45.22	42.99	-3.4	-9.1	-4.1	0.7	-4.9
of which											
Iron & Steel	15.53	7.25	3.93	3.34	3.16	2.96	-11.9	-9.7	-4.0	-5.2	-6.6
Chemical	19.40	16.68	11.62	10.02	9.21	7.02	-2.5	-5.9	-3.6	-8.1	-23.8
Non-metallic minerals	21.75	16.92	8.41	8.54	8.60	5.85	-4.1	-11.0	0.4	0.6	-31.9
Gas	66.38	67.78	65.56	75.40	71.65	78.16	0.4	-0.6	3.6	-5.0	9.1
of which											
Iron & Steel	24.65	21.45	17.53	16.92	16.19	18.38	-2.3	-3.3	-0.9	-4.3	13.5
Chemical	15.06	13.16	14.46	17.19	14.66	18.75	-2.2	1.6	4.4	-14.7	28.0
Non-metallic minerals	9.57	10.52	8.67	10.51	10.37	10.57	1.6	-3.2	4.9	-1.3	1.9
Electricity	46.61	52.85	55.12	61.03	61.19	61.66	2.1	0.7	2.6	0.3	0.8
of which											
Iron & Steel	7.67	8.13	7.32	7.80	7.55	7.33	1.0	-1.7	1.6	-3.3	-2.9
Chemical	12.12	11.89	12.61	14.94	13.53	14.34	-0.3	1.0	4.3	-9.4	6.0
Non-metallic minerals	3.25	3.78	3.96	4.48	4.62	4.74	2.5	0.8	3.1	3.2	2.5
Heat	1.72	2.29	3.77	4.12	2.06	1.98	4.8	8.7	2.3	-49.9	-4.0
Improvement in Industrial Energy Intensity											
since 1974 (in % terms)		17	32	38	41	40		11.3	5.0	7.8	-2.7
Industrial Production Index	88.7	97.2	102.2	115.2	115.1	113.6					

Looking at energy developments in industry on a Member State basis, the picture is not fully homogeneous, although there is a general trend of stagnation or decrease in demand. In addition, it appears that most energy intensity gains were captured in the 1980 to 1986 period when industrial activity stagnated and real prices increased significantly. Portugal is the exception to this general trend: Since 1974 Portugal has been losing economic efficiency in the energy use for industrial purposes. After 1980 the losses in efficiency have been significantly lower and, in 1992, the intensity ratio was still 14% lower than in 1974. Obviously, the industrialisation efforts, to a great extent based on energy-intensive branches, have contributed significantly for this evolution. On the other extreme, Luxembourg presents the greatest gains in this ratio, but this was mainly due to drop in activity of the iron & steel industry. Second after Luxembourg, Ireland presents very substantial gains in intensity throughout the period simultaneously with the fastest growth in industrial activity. Structural changes and technological efficiency improvements lead to significant intensity gains in the four major Member States (France, Germany, Italy and the United Kingdom). The share of total industrial energy demand of these four Member states together dropped from 79% in 1974 to 75% in 1992, given that their consumption decreased by 27% compared to an increase in industrial activity of between 17% and 39% in the period. Belgium and the Netherlands also present significant gains in intensity, with the former (41% intensity improvement from 1974 to 1992) presenting more or less the same value as France, and the latter with significantly lower gains (25% gain since 1974). However, the intensity gains in the Netherlands between 1980 and 1992 are approximately equivalent to those of Belgium. Likewise, Denmark did not present any intensity gains up to 1980 but, in 1992, shows an overall gain of 37%. Greece and Spain have a similar behaviour with intensity gains of about 18% to 19% in 1992 compared to 1974.

INDICES OF INDUSTRIAL PRODUCTION (1985 = 100)

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Belgium	92.5	95.5	100.8	117.7	115.3	115.2	0.5	0.9	4.0	-2.0	-0.1
Denmark	76.5	84.3	106.5	107.8	110.2	112.0	1.6	4.0	0.3	2.2	1.6
France	91.7	99.6	100.9	114.2	114.1	112.8	1.4	0.2	3.1	-0.1	-1.1
Germany *	85.4	95.1	101.4	117.9	121.2	118.9	1.8	1.1	3.8	2.8	-1.9
Greece	73.9	99.5	99.8	103.3	101.7	100.7	5.1	0.0	0.9	-1.5	-1.0
Ireland	62.2	79.0	102.2	143.8	148.5	162.1	4.1	4.4	8.9	3.3	9.2
Italy	89.6	104.4	104.1	117.8	115.4	113.6	2.6	-0.1	3.1	-2.0	-1.6
Luxembourg	97.4	81.9	102.1	118.0	118.6	117.6	-2.9	3.7	3.7	0.5	-0.8
Netherlands	89.1	95.0	100.2	110.1	113.2	113.4	1.1	0.9	2.4	2.8	0.2
Portugal	96.5	97.0	107.3	135.3	135.1	132.1	0.1	1.7	6.0	-0.1	-2.2
Spain	89.7	96.7	103.1	116.2	115.2	111.2	1.3	1.1	3.0	-0.9	-3.5
United Kingdom	90.7	93.4	102.3	109.3	106.1	105.8	0.5	1.5	1.7	-2.9	-0.3
EUROPEAN UNION *	**88.7**	**97.2**	**102.2**	**115.2**	**115.1**	**113.6**	**1.5**	**0.8**	**3.1**	**-0.2**	**-1.2**

** 1974 and 1980 data relate only to the former West Germany.*

INDUSTRIAL ENERGY CONSUMPTION

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
								Annual % Change			
Belgium total	15.85	13.04	10.09	11.33	11.56	11.65	-3.2	-4.2	2.9	2.0	0.8
Share in European Union (%)	5.4	4.8	4.3	4.8	5.1	5.1	-1.7	-1.8	2.5	7.4	0.1
Improvement in Energy Intensity		20	42	44	42	41		12.7	1.3	-5.3	-1.2
Denmark total	2.71	2.98	2.53	2.60	2.72	2.51	1.6	-2.7	0.7	4.7	-7.7
Share in European Union (%)	0.9	1.1	1.1	1.1	1.2	1.1	3.2	-0.3	0.2	10.2	-8.3
Intensity improvement since 1974 (%)		0	33	32	30	37		131.5	-0.7	-5.1	21.1
France total	48.50	44.93	34.42	35.38	34.95	35.15	-1.3	-4.3	0.7	-1.2	0.6
Share in European Union (%)	16.4	16.7	14.8	14.9	15.5	15.5	0.2	-2.0	0.3	4.0	-0.1
Intensity improvement since 1974 (%)		15	35	41	42	41		15.9	3.9	1.6	-2.4
Germany total	93.00	89.80	81.47	75.14	64.24	67.69	-0.6	-1.6	-2.0	-14.5	5.4
Share in European Union (%)	31.5	33.3	35.0	31.7	28.6	29.9	0.9	0.8	-2.4	-10.0	4.7
Intensity improvement since 1974 (%)		13	26	41	51	48		12.0	12.2	23.8	-7.0
Greece total	3.16	3.94	3.54	3.75	3.50	3.54	3.7	-1.8	1.4	-6.8	1.3
Share in European Union (%)	1.1	1.5	1.5	1.6	1.6	1.6	5.3	0.7	1.0	-1.9	0.7
Intensity improvement since 1974 (%)		7	17	15	20	18		15.0	-2.9	29.8	-9.5
Ireland total	1.73	1.62	1.71	2.07	2.08	1.99	-1.1	0.9	5.0	0.2	-4.4
Share in European Union (%)	0.6	0.6	0.7	0.9	0.9	0.9	0.4	3.4	4.5	5.5	-5.0
Intensity improvement since 1974 (%)		26	40	48	50	56		7.2	4.8	3.2	12.5
Italy total	38.95	38.06	31.24	35.91	35.07	32.81	-0.4	-3.2	3.5	-2.4	-6.4
Share in European Union (%)	13.2	14.1	13.4	15.2	15.6	14.5	1.1	-0.8	3.1	2.8	-7.0
Intensity improvement since 1974 (%)		16	31	30	30	34		11.5	-0.9	0.8	11.5
Luxembourg total	3.61	2.28	1.67	1.72	1.69	1.60	-7.3	-5.1	0.8	-1.5	-5.3
Share in European Union (%)	1.2	0.8	0.7	0.7	0.8	0.7	-5.9	-2.8	0.3	3.7	-5.9
Intensity improvement since 1974 (%)		25	56	61	61	63		14.6	2.1	1.3	2.8
Netherlands total	13.18	13.85	13.90	13.23	12.30	12.50	0.8	0.1	-1.2	-7.1	1.7
Share in European Union (%)	4.5	5.1	6.0	5.6	5.5	5.5	2.4	2.5	-1.6	-2.2	1.0
Intensity improvement since 1974 (%)		1	6	19	27	25		27.4	31.9	41.5	-4.2
Portugal total	2.34	3.12	2.85	3.54	3.67	3.64	4.9	-1.5	5.6	3.5	-0.8
Share in European Union (%)	0.8	1.2	1.2	1.5	1.6	1.6	6.5	1.0	5.1	8.9	-1.4
Intensity improvement since 1974 (%)		-33	-10	-8	-12	-14		-18.3	-4.7	48.6	13.7
Spain total	18.77	18.73	16.89	18.16	19.03	18.90	0.0	-1.7	1.8	4.8	-0.7
Share in European Union (%)	6.4	6.9	7.3	7.7	8.5	8.4	1.5	0.7	1.4	10.3	-1.3
Intensity improvement since 1974 (%)		8	22	25	21	19		19.4	3.9	-16.8	-10.8
United kingdom total	53.64	37.35	32.57	33.96	34.15	34.38	-5.9	-2.3	1.1	0.5	0.7
Share in European Union (%)	18.2	13.8	14.0	14.3	15.2	15.2	-4.4	0.2	0.6	5.8	0.1
Intensity improvement since 1974 (%)		32	46	47	46	45		6.1	0.7	-3.9	-1.2
European Union total	295.45	269.72	232.88	236.79	224.94	226.36	-1.5	-2.4	0.4	-5.0	0.6
Intensity improvement since 1974 (%)		17	32	38	41	40		11.3	5.0	7.8	-2.7

ENERGY PRICES TO CONSUMERS IN CONSTANT 1990 ECU PER TOE

Industry	1985	1986	1990	1991	1992	1993	86/85	90/86	91/90	92/91	93/92
							Annual % Change				
Belgium											
Steam coal	121	92	62	58	54	53	-24.0	-9.2	-7.7	-5.4	-2.1
Heavy fuel oil 3.5% S	278	120	98	78	75	82	-56.7	-5.1	-20.3	-4.0	10.1
Natural gas	274	179	114	124	104	98	-34.6	-10.7	9.1	-16.5	-5.9
Electricity	775	701	585	552	534	530	-9.6	-4.4	-5.5	-3.3	-0.8
Denmark											
Steam coal	191	156	135	131	122	120	-18.3	-3.6	-3.1	-6.9	-1.1
Heavy fuel oil 3.5% S	307	145	119	99	95	115	-53.0	-4.8	-16.4	-4.0	20.8
Natural gas	na	na	na	na	na	na	na	na	na	na	na
Electricity	875	634	570	602	569	755	-27.6	-2.6	5.7	-5.4	32.6
France											
Steam coal	145	130	106	104	102	101	-10.4	-4.9	-2.0	-2.0	-1.2
Heavy fuel oil 3.5% S	294	173	116	98	87	81	-41.3	-9.4	-15.4	-11.3	-6.5
Natural gas	271	179	122	120	110	112	-34.1	-9.0	-2.1	-8.0	1.7
Electricity	602	562	516	495	483	479	-6.7	-2.1	-4.2	-2.4	-0.8
Germany											
Steam coal	209	209	203	198	202	195	0.1	-0.8	-2.5	2.3	-3.6
Heavy fuel oil 3.5% S	292	134	117	114	97	90	-54.2	-3.2	-3.0	-14.4	-7.6
Natural gas	284	223	148	157	142	127	-21.5	-9.8	6.5	-9.7	-10.3
Electricity	833	866	835	797	766	740	3.9	-0.9	-4.6	-3.9	-3.3
Greece											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	284	253	136	125	121	113	-10.8	-14.4	-8.3	-3.4	-6.3
Natural gas	na	na	na	na	na	na	na	na	na	na	na
Electricity	775	775	593	572	531	469	0.0	-6.5	-3.6	-7.1	-11.7
Ireland											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	308	171	123	113	105	109	-44.6	-7.8	-8.6	-6.2	3.3
Natural gas	389	368	259	251	242	236	-5.5	-8.4	-3.1	-3.5	-2.8
Electricity	965	930	619	601	579	563	-3.7	-9.7	-3.1	-3.5	-2.8
Italy											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	299	124	155	146	133	130	-58.4	5.7	-6.2	-9.1	-1.6
Natural gas	272	124	124	130	127	130	-54.5	0.0	5.2	-2.8	2.8
Electricity	1183	994	894	929	934	921	-16.0	-2.6	3.9	0.6	-1.5
Luxembourg											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	297	119	109	96	100	91	-60.1	-2.0	-12.3	4.4	-9.0
Natural gas	351	329	175	181	171	166	-6.4	-14.5	3.2	-5.7	-3.0
Electricity	740	705	649	584	571	559	-4.7	-2.0	-10.0	-2.3	-2.1
Netherlands											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	290	132	152	133	131	127	-54.4	3.6	-12.9	-1.3	-3.3
Natural gas	235	141	97	89	86	84	-39.8	-9.0	-8.1	-3.0	-2.2
Electricity	690	567	479	479	460	457	-17.8	-4.1	-0.1	-3.9	-0.6
Portugal											
Steam coal	159	118	70	66	54	48	-25.7	-12.2	-6.6	-18.3	-9.7
Heavy fuel oil 3.5% S	296	229	151	137	127	120	-22.7	-9.8	-9.7	-7.2	-5.3
Natural gas	na	na	na	na	na	na	na	na	na	na	na
Electricity	1051	1073	1060	1071	1040	976	2.1	-0.3	1.1	-2.9	-6.1
Spai.n											
Steam coal	na	na	na	na	na	na	na	na	na	na	na
Heavy fuel oil 3.5% S	360	228	119	102	93	103	-36.6	-14.9	-14.9	-8.0	10.4
Natural gas	451	352	264	231	193	198	-22.0	-6.9	-12.5	-16.4	2.4
Electricity	969	976	893	905	875	858	0.7	-2.2	1.4	-3.3	-2.0
United Kingdom											
Steam coal	151	142	99	92	89	81	-5.8	-8.6	-7.2	-3.8	-8.9
Heavy fuel oil 3.5% S	303	155	113	93	87	87	-48.9	-7.6	-17.4	-7.0	0.0
Natural gas	212	183	125	122	114	107	-13.8	-9.1	-2.7	-6.1	-5.9
Electricity	777	762	624	623	643	666	-1.9	-4.9	-0.1	3.1	3.6
Community											
Steam coal	168	160	135	131	126	123	-5.2	-4.0	-3.5	-3.5	-2.2
Heavy fuel oil 3.5% S	303	155	134	119	110	109	-48.8	-3.6	-11.0	-8.0	-0.3
Natural gas	264	184	134	135	126	121	-30.3	-7.5	0.5	-6.7	-3.9
Electricity	848	812	737	738	725	718	-4.3	-2.4	0.2	-1.8	-0.9

TRANSPORT

Energy consumption in Transport grew steadily from 1974 at an annual average of 3%. In this sector, energy demand has grown faster than the overall economic activity. In fact, the elasticity of energy consumption in the transport sector to GDP was 1.42 in the period. A good example is the growth rates between 1986 and 1990 when consumption increased by 4.8% per year against a GDP growth of 3.1%, or elasticity of 1.55. Apart from economic activity, it is also true that real prices for transport fuel decreased significantly from 1985 to 1990, thus pushing up consumption in this sector. However, prices do not matter much even when they increase. The year 1991 gives a good illustration because despite a real price increase in the order of 1.2% to 2.4%, consumption continued to grow by 1.4% against a GDP growth of 1.0% (1.4 of elasticity) and a Private Consumption growth of 1.3%. All these historical developments mean that, despite significant improvements in the specific consumption of new vehicles, people bought more, bigger cars and drove them more.

In addition, the restructuring of industry away from large, less concentrated facilities and the increased use of the "just-in-time" method in most of the small and medium-size industries led to a significant increase in road freight transport. These developments were reflected in the fact that energy consumption on the road passed from 79% of total transport in 1974 to 83% in 1992; At the same time, the share of automotive diesel oil in total road consumption passed from 29% in 1974 to 43% in 1992. The other growth area is air transport: Jet fuel consumption grew more or less continuously from 1974 to 1992 by 2.5% per year on average. Electricity consumption for transport (public transport) remains a very small share of the total at around 1.5%.

FINAL ENERGY CONSUMPTION

EUROPEAN UNION	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
Mtoe							Annual % Change				
Transports	142.44	175.88	196.66	236.80	240.22	246.39	3.6	1.9	4.8	1.4	2.6
Solids	1.60	0.39	0.22	0.08	0.00	0.00	-20.9	-8.9	-21.9	-99.2	100.0
Oil	138.29	172.56	193.16	232.99	236.27	242.40	3.8	1.9	4.8	1.4	2.6
of which:											
Road	111.89	145.70	165.64	197.90	200.55	205.51	4.5	2.2	4.5	1.3	2.5
Motor Gasoline	78.45	96.52	100.99	112.74	112.58	114.90	3.5	0.8	2.8	-0.1	2.1
Diesel Oil	32.56	47.35	62.33	82.50	85.37	88.15	6.4	4.7	7.3	3.5	3.3
Air	17.52	18.20	20.95	26.41	26.27	27.16	0.6	2.4	6.0	-0.5	3.4
Jet Fuel	17.43	18.06	20.83	26.28	26.15	27.05	0.6	2.4	6.0	-0.5	3.4
Gas	0.18	0.26	0.24	0.21	0.21	0.21	6.1	-1.1	-3.7	2.0	0.7
Electricity	2.37	2.66	3.03	3.53	3.74	3.77	2.0	2.2	3.8	6.0	0.8
Improvement in Transport Energy intensity											
since 1974 (in % terms)		-7	-8	-16	-16	-18		3.1	16.8	3.1	10.2
Specific Consumption in Road traffic (toe/vehicle)	1.26	1.36	1.29	1.16	na	na	1.3	-0.8	-2.7	na	na

Except for Ireland, all Member States show increases in the energy intensity ratio (energy consumed in transport over GDP). Luxembourg has the highest degree of both intensity increases and consumption per vehicle. However, this does not fully correspond to consumption in Luxembourg-plate vehicles. In fact, consumers in neighbouring Member States (Belgium, France and Germany) take advantage of lower prices and get a part of their supplies in Luxembourg. From 1980 to 1992, there are four categories of behaviour: the first including Greece, Portugal and Spain where intensity increased by 27% or more, mainly due to very fast increases in the car fleets; the second including Belgium, Denmark, Italy, the Netherlands and the United Kingdom where intensity increased between 9% and 15%; a third including France and Germany where intensity only increased by 4%; and finally Ireland which is the only Member State where there was a gain in intensity of 19%.

Looking at specific fuel consumption (data only available up to 1990) there is no common value among Member States. It is true that this variable depends to a very large extent on the type (engine sizes) of the respective car fleets and on average annual distances driven. However, there are some discrepancies difficult to explain given that some smaller Member States (for example Ireland) present higher specific consumption than larger Member States (for example Germany). But factors, such as the average age of the car fleets, the type of urbanisation and population density, play an important role. On the other hand, Portugal and Spain, both with the lowest average specific consumption, have totally different behaviours. In Portugal there was a clear decrease in this indicator by almost 24% between 1974 and 1990, and Spain presents an increase of 61%. While for Portugal the improvement can be explained by considering that the increase in the car parc was mainly based on small-size engines thus making up for an increase in annual driven distances, it is difficult to explain the evolution in Spain.

Greece and Ireland seem also to be special cases explained possibly by land use patterns. Although in these two Member States the average specific consumption improved significantly, they presented, in 1990, very high levels compared to the European average. Denmark, in spite of relatively more expensive cars and fuels and of a very slight increase in the car parc, not only presented a constant increase in specific consumption since 1974 but also had the highest level in the European Union in 1990. Concerning those Member States where automobile construction is concentrated, the behaviour of specific consumption is also heterogeneous. While there was a certain stability of this indicator in France, Italy and the United Kingdom, Germany shows a drop of 9% in average specific consumption from 1974 to 1990.

ENERGY CONSUMPTION IN TRANSPORT

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
								Annual % Change			
Belgium total	4.66	5.79	6.59	7.70	7.84	8.28	3.7	2.2	4.0	1.7	5.7
Intensity Improvement since 1974 (%)		-9	-17	-19	-19	-24		12.0	2.6	-0.9	26.8
Road consumption	3.70	4.94	5.66	6.44	6.50	6.75	5.0	2.3	3.3	0.9	3.8
Specific Consumption in (toe/vehicle)	1.32	1.43	1.52	1.52	na	na	1.4	1.0	0.0	na	na
Denmark total	2.92	3.15	3.56	4.50	4.41	4.45	1.2	2.1	6.0	-1.9	0.8
Intensity Improvement since 1974 (%)		4	8	-11	-8	-7		11.4	-	-30.3	-17.9
Road consumption	1.92	2.30	2.69	3.20	3.20	3.27	3.0	2.7	4.4	-0.1	2.3
Specific Consumption in (toe/vehicle)	1.33	1.39	1.46	1.68	na	na	0.8	0.8	3.7	na	na
France total	25.56	31.73	35.15	41.91	41.56	42.57	3.7	1.7	4.5	-0.8	2.4
Intensity Improvement since 1974 (%)		-7	-7	-13	-11	-11		0.9	16.6	-17.1	7.3
Road consumption	22.10	27.62	30.84	36.17	35.75	36.41	3.8	1.9	4.1	-1.2	1.8
Specific Consumption in (toe/vehicle)	1.32	1.26	1.24	1.32	na	na	-0.7	-0.3	1.5	na	na
Germany total	37.63	45.99	49.68	58.69	59.57	59.86	3.4	1.3	4.3	1.5	0.5
Intensity Improvement since 1974 (%)		-6	-6	-12	-11	-11		0.5	20.2	-5.3	-5.7
Road consumption	30.35	39.57	42.79	50.53	51.50	51.64	4.5	1.3	4.2	1.9	0.3
Specific Consumption in (toe/vehicle) *	1.65	1.59	1.48	1.53	na	na	-0.7	-1.1	0.8	na	na
Greece total	2.35	3.93	4.66	5.81	5.98	6.15	8.9	2.9	5.7	2.8	2.9
Intensity Improvement since 1974 (%)		-27	-39	-62	-64	-65		6.2	12.4	2.5	2.6
Road consumption	1.56	2.29	3.24	3.90	4.18	4.28	6.6	5.9	4.8	7.0	2.5
Specific Consumption in (toe/vehicle)	2.59	1.78	1.61	1.56	na	na	-6.1	-1.6	-0.8	na	na
Ireland total	1.38	1.74	1.77	1.97	2.02	2.04	3.9	0.3	2.8	2.6	1.0
Intensity Improvement since 1974 (%)		4	14	24	24	23		21.0	15.1	-0.1	-4.8
Road consumption	1.09	1.47	1.42	1.56	1.61	1.72	5.1	-0.6	2.4	3.5	6.4
Specific Consumption in (toe/vehicle)	1.88	1.80	1.70	1.63	na	na	-0.8	-0.9	-1.0	na	na
Italy total	19.06	24.61	29.40	33.40	34.31	35.84	4.3	3.0	3.2	2.7	4.5
Intensity Improvement since 1974 (%)		-5	-14	-14	-16	-20		18.1	1.2	10.0	22.8
Road consumption	16.05	21.90	26.43	30.18	30.78	32.30	5.3	3.2	3.4	2.0	5.0
Specific Consumption in (toe/vehicle)	1.04	1.13	1.02	1.01	na	na	1.5	-1.7	-0.3	na	na
Luxembourg total	0.29	0.49	0.63	1.01	1.18	1.28	9.4	4.1	12.6	17.8	7.6
Intensity Improvement since 1974 (%)		-64	-75	-135	-169	-186		2.8	15.7	25.0	10.1
Road consumption	0.22	0.42	0.53	0.87	1.04	1.13	11.5	4.2	13.2	19.1	9.2
Specific Consumption in (toe/vehicle)	1.46	2.69	3.12	4.33	na	na	10.8	2.5	8.5	na	na
Netherlands total	6.72	8.58	9.20	10.32	10.51	11.17	4.2	1.2	2.9	1.8	6.3
Intensity Improvement since 1974 (%)		-12	-12	-12	-12	-21		0.1	-0.7	-3.6	79.0
Road consumption	4.87	6.82	7.05	8.04	8.05	8.40	5.8	0.6	3.3	0.2	4.3
Specific Consumption in (toe/vehicle)	1.32	1.38	1.31	1.32	na	na	0.8	-0.8	0.1	na	na
Portugal total	1.88	2.55	2.81	3.73	3.98	4.31	5.2	1.6	7.4	6.8	8.3
Intensity Improvement since 1974 (%)		-9	-11	-22	-28	-36		2.4	20.6	24.6	28.4
Road consumption	1.18	1.93	2.20	3.03	3.26	3.57	8.5	2.2	8.3	7.8	9.4
Specific Consumption in (toe/vehicle)	1.18	1.11	0.87	0.90	na	na	-1.0	-4.0	0.8	na	na
Spain total	11.14	14.38	16.05	22.33	24.17	24.86	4.3	1.9	8.6	8.2	2.9
Intensity Improvement since 1974 (%)		-17	-18	-36	-44	-44		0.3	19.1	22.1	0.8
Road consumption	5.96	10.43	12.33	17.68	18.63	19.72	9.8	2.8	9.4	5.4	5.8
Specific Consumption in (toe/vehicle)	0.75	1.16	1.07	1.21	na	na	7.7	-1.4	3.1	na	na
United Kingdom total	28.85	32.96	37.17	45.45	44.70	45.58	2.2	2.0	5.2	-1.7	2.0
Intensity Improvement since 1974 (%)		-5	-3	-12	-13	-15		-8.3	41.9	5.6	13.1
Road consumption	22.90	26.03	30.48	36.31	36.05	36.32	2.2	2.7	4.5	-0.7	0.8
Specific Consumption in (toe/vehicle)	1.49	1.47	1.49	1.50	na	na	-0.2	0.2	0.3	na	na
European Union total	142.44	175.88	196.66	236.80	240.22	246.39	3.6	1.9	4.8	1.4	2.6
Intensity Improvement since 1974 (%)		-7	-8	-16	-16	-18		3.1	16.8	3.1	10.2
Road consumption	111.89	145.70	165.64	197.90	200.55	205.51	4.5	2.2	4.5	1.3	2.5
Specific Consumption in (toe/vehicle)	1.26	1.36	1.29	1.16	na	na	1.3	-0.8	-2.7	na	na

* *Based only on Former West Germany data.*

ENERGY PRICES TO CONSUMERS IN CONSTANT 1990 ECU PER TOE

Transport	1985	1986	1990	1991	1992	1993	86/85	90/86	91/90	92/91	93/92
							Annual % Change				
Belgium											
Premium Gasoline	1253	940	1017	1021	1004	1024	-25.0	2.0	0.4	-1.7	2.0
Diesel	678	474	533	559	546	538	-30.1	3.0	4.8	-2.3	-1.4
Denmark											
Premium Gasoline	1315	1332	1119	1045	985	919	1.3	-4.3	-6.6	-5.7	-6.7
Diesel	518	329	295	372	347	347	-36.5	-2.6	25.9	-6.8	0.0
France											
Premium Gasoline	1321	1088	1077	1045	996	1013	-17.6	-0.2	-3.0	-4.6	1.7
Diesel	733	565	523	510	478	480	-23.0	-1.9	-2.5	-6.3	0.4
Germany											
Premium Gasoline	1035	784	871	944	963	922	-24.3	2.7	8.3	2.0	-4.3
Diesel	739	545	520	535	511	494	-26.2	-1.2	2.9	-4.5	-3.2
Greece											
Premium Gasoline	1047	972	791	798	809	864	-7.2	-5.0	1.0	1.4	6.7
Diesel	457	420	292	358	428	432	-8.0	-8.7	22.6	19.5	1.0
Ireland											
Premium Gasoline	1407	1224	1140	1095	1001	983	-13.0	-1.7	-4.0	-8.6	-1.8
Diesel	890	742	681	680	629	630	-16.6	-2.1	-0.1	-7.5	0.2
Italy											
Premium Gasoline	1637	1495	1382	1338	1253	1263	-8.7	-2.0	-3.2	-6.4	0.8
Diesel	646	527	662	708	666	691	-18.3	5.8	7.0	-5.9	3.8
Luxembourg											
Premium Gasoline	1000	759	768	734	758	795	-24.1	0.3	-4.4	3.2	4.9
Diesel	602	414	387	372	394	438	-31.3	-1.6	-4.0	6.1	11.0
Netherlands											
Premium Gasoline	1178	947	1066	1104	1119	1081	-19.6	3.0	3.5	1.3	-3.4
Diesel	569	388	480	486	465	513	-31.8	5.4	1.3	-4.3	10.4
Portugal											
Premium Gasoline	1441	1336	1057	1023	938	914	-7.3	-5.7	-3.2	-8.3	-2.6
Diesel	745	630	548	554	519	505	-15.4	-3.4	1.1	-6.4	-2.6
Spain											
Premium Gasoline	1378	1117	897	902	929	966	-19.0	-5.3	0.6	2.9	4.1
Diesel	789	627	518	546	537	561	-20.6	-4.7	5.5	-1.6	4.3
United Kingdom											
Premium Gasoline	1148	958	895	915	910	965	-16.5	-1.7	2.2	-0.5	6.0
Diesel	814	668	591	594	584	627	-18.0	-3.0	0.5	-1.6	7.4
Community											
Premium Gasoline	1247	1033	1003	1015	1002	1010	-17.2	-0.7	1.2	-1.3	0.8
Diesel	714	554	551	565	538	546	-22.5	-0.1	2.4	-4.7	1.6

Note: VAT is only included in the case of Premium Gasoline.

DOMESTIC AND TERTIARY

Energy consumption in the Domestic and Tertiary sectors grew from 1974 to 1992 by 13% overall, but not in a steady way. In fact, energy consumption in this sector, although a function of population, number of households, private income and evolution of the services sector, is also highly dependent on weather conditions (space heating) and thus presents some marked fluctuations reflecting prevailing weather conditions Apart from electricity and due to statistical difficulties, it is not possible to give a full split of energy demand between the domestic and the services sectors. It seems that the overall 13% growth in demand is mainly due to increased needs in the services sector, particularly in the commerce (supermarkets, shopping centres, etc.).

In terms of fuel mix, solid fuels consumption more than halved from 1974 to 1992 (almost 33% down in the domestic and practically disappeared from the services sector); oil demand continuously dropped throughout the whole period although faster in the services sector. Heat had a strong penetration in both sectors but still has a low share of total in 1992 (2%). Gas and electricity consumption continuously increased their penetration in both sectors (faster in services) to attain, in 1992, shares of 37% and 25% of total respectively (18% and 15% in 1974 respectively). To measure intensity gains in these sectors is a very difficult task. If we take the per capita consumption as an indicator, its relative stability in the period suggests that increased standards of living and the growth of the services sector have made up for all the technological and other efficiency improvements introduced, mainly since 1980.

FINAL ENERGY CONSUMPTION

EUROPEAN UNION	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
Mtoe							Annual % Change				
Domestic and Tertiary	275.10	301.75	315.88	299.05	319.27	309.98	1.6	0.8	-1.4	6.8	-2.9
Solids	46.96	37.25	36.34	26.02	21.03	15.73	-3.8	-0.4	-8.0	-19.2	-25.2
Oil	135.73	127.87	112.22	91.00	99.18	97.28	-1.0	-2.2	-5.1	9.0	-1.9
of which:											
Gas Diesel Oil	105.14	101.31	92.73	73.34	80.38	79.26	-0.6	-1.5	-5.7	9.6	-1.4
Gas	48.67	78.69	96.60	99.94	115.57	113.05	8.3	3.5	0.9	15.6	-2.2
Electricity	39.99	52.52	64.98	73.02	76.23	77.50	4.6	3.6	3.0	4.4	1.7
of which:											
Residential	24.13	31.60	38.04	40.84	41.38	42.12	4.6	3.1	1.8	1.3	1.8
Commercial & Public Services	14.40	19.16	24.80	29.81	32.33	32.87	4.9	4.4	4.7	8.5	1.7
Heat	3.74	5.41	5.74	9.07	7.26	6.43	6.3	1.0	12.1	-19.9	-11.5
Total Energy Consumption per Capita											
(toe/inhabitant)	0.84	0.90	0.93	0.87	0.93	0.89	1.2	0.5	-1.7	6.3	-3.4
Absolute Heating Degree Days	na	na	2534	2140	2547	2355	na	na	-4.1	19.0	-7.6
Difference to Average in %	na	na	3.0	-13.0	3.5	-4.3	-	-	-	-	-

The European Union can be split into three categories of Member States: the fast growers in energy needs for the domestic and tertiary sectors with an annual average growth of more than 3% (Greece, Portugal and Spain); the medium growers with rates between 1% and 2% per year (Belgium, Germany, Ireland, Italy, Luxembourg and the Netherlands); and the low growers with rates below 1% per year (Denmark, France and the United Kingdom).

While for Greece, Portugal and Spain this evolution corresponds to an improvement in the standards of living, given that spacing heating needs are not very significant, in the case of all other Member States the analysis is less straightforward. In fact in most of these latter Member States, energy consumption for space heating is rather important and thus the evolution depends to a large extent on weather conditions. But in the Southern Member States there seems to be a strong relationship with the evolution of private consumption. The only clear exception is Italy where energy consumption only grew by 1.1% per year while private consumption increased by 3.2% per year in the period. In this case, geography and thus totally different space heating needs between the North and the South also complicate the whole analysis.

CLIMATIC CONDITIONS: VARIATION TO AVERAGE (% DEGREE-DAY VARIATIONS)

	1974	1980	1986	1990	1991	1992	1993
Belgium	n.a.	n.a.	2.7	-17.4	0.3	-5.8	-7.3
Denmark	n.a.	n.a.	5.1	-16.6	-2.7	-7.0	-5.0
France	n.a.	n.a.	4.2	-13.7	5.2	-3.6	-4.7
Germany	n.a.	n.a.	0.9	-14.8	1.4	-2.4	-8.7
Greece	n.a.	n.a.	-8.6	-16.1	7.4	1.4	0.9
Ireland	n.a.	n.a.	9.1	-7.9	1.6	-0.7	1.9
Italy	n.a.	n.a.	5.2	-7.7	9.3	-11.9	-6.5
Luxembourg	n.a.	n.a.	3.7	-14.2	0.5	-8.7	-7.6
Netherlands	n.a.	n.a.	2.0	-18.7	0.0	-9.1	-6.0
Portugal	n.a.	n.a.	4.2	-5.0	13.3	0.1	11.7
Spain	n.a.	n.a.	7.1	-5.4	14.0	2.6	10.7
United Kingdom	n.a.	n.a.	3.2	-14.1	-1.8	-5.0	-3.4
EUROPEAN UNION	**n.a.**	**n.a.**	**3.0**	**-13.0**	**3.5**	**-4.3**	**-4.4**

Note: + means colder, and - means warmer.

ENERGY CONSUMPTION IN THE DOMESTIC AND TERTIARY SECTORS

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Belgium total	11.86	13.13	12.94	11.49	12.79	13.02	1.7	-0.2	-2.9	11.3	1.8
Consumption per capita (toe/inhab.)	1.21	1.33	1.31	1.15	1.28	1.30	1.6	-0.3	-3.2	11.1	1.6
Absolute Heating Degree Days	na	na	2831	2277	2765	2596	na	na	-5.3	21.4	-6.1
Difference to Average in % *(1)*	na	na	2.7	-17.4	0.3	-5.8					
Denmark total	8.06	8.40	7.64	6.90	6.75	6.75	0.7	-1.6	-2.5	-2.3	0.1
Consumption per capita (toe/inhab.)	1.60	1.64	1.49	1.34	1.31	1.31	0.4	-1.6	-2.6	-2.5	-0.1
Absolute Heating Degree Days	na	na	3438	2729	3184	3043	na	na	-5.6	16.7	-4.4
Difference to Average in % *(1)*	na	na	5.1	-16.6	-2.7	-7.0					
France total	48.78	51.43	53.03	48.99	54.35	54.43	0.9	0.5	-2.0	10.9	0.1
Consumption per capita (toe/inhab.)	0.93	0.95	0.96	0.86	0.95	0.95	0.4	0.0	-2.5	10.3	-0.4
Absolute Heating Degree Days	na	na	2675	2217	2701	2475	na	na	-4.6	21.8	-8.4
Difference to Average in % *(1)*	na	na	4.2	-13.7	5.2	-3.6					
Germany total	91.99	100.13	106.67	96.25	96.88	90.97	1.4	1.1	-2.5	0.7	-6.1
Consumption per capita (toe/inhab.)	1.17	1.28	1.37	1.22	1.22	1.14	1.5	1.2	-2.9	0.0	-6.9
Absolute Heating Degree Days	na	na	3154	2664	3172	3052	na	na	-4.1	19.1	-3.8
Difference to Average in % *(1)*	na	na	0.9	-14.8	1.4	-2.4					
Greece total	2.17	2.70	3.13	4.00	4.30	4.20	3.7	2.5	6.3	7.7	-2.5
Consumption per capita (toe/inhab.)	0.24	0.28	0.31	0.40	0.42	0.41	2.4	2.0	6.0	6.5	-3.2
Absolute Heating Degree Days	na	na	1332	1222	1565	1477	na	na	-2.1	28.1	-5.6
Difference to Average in % *(1)*	na	na	-8.6	-16.1	7.4	1.4					
Ireland total	1.80	2.37	3.00	2.92	3.14	2.98	4.7	4.0	-0.7	7.6	-5.1
Consumption per capita (toe/inhab.)	0.58	0.70	0.85	0.83	0.89	0.84	3.2	3.3	-0.4	7.0	-5.9
Absolute Heating Degree Days	na	na	2702	2281	2516	2459	na	na	-4.1	10.3	-2.3
Difference to Average in % *(1)*	na	na	9.1	-7.9	1.6	-0.7					
Italy total	30.56	33.84	34.36	37.74	40.58	39.16	1.7	0.3	2.4	7.5	-3.5
Consumption per capita (toe/inhab.)	0.55	0.60	0.60	0.65	0.70	0.68	1.3	0.0	2.2	7.3	-3.7
Absolute Heating Degree Days	na	na	1994	1749	2072	1670	na	na	-3.2	18.5	-19.4
Difference to Average in % *(1)*	na	na	5.2	-7.7	9.3	-11.9					
Luxembourg total	0.50	0.59	0.61	0.58	0.68	0.66	2.6	0.7	-1.5	16.9	-3.0
Consumption per capita (toe/inhab.)	1.41	1.62	1.66	1.51	1.75	1.70	2.3	0.4	-2.3	15.6	-2.7
Absolute Heating Degree Days	na	na	3290	2721	3189	2896	na	na	-4.6	17.2	-9.2
Difference to Average in % *(1)*	na	na	3.7	-14.2	0.5	-8.7					
Netherlands total	18.73	21.22	20.38	19.21	22.09	20.86	2.1	-0.7	-1.5	15.0	-5.6
Consumption per capita (toe/inhab.)	1.38	1.50	1.40	1.28	1.47	1.37	1.4	-1.2	-2.1	14.1	-6.3
Absolute Heating Degree Days	na	na	2904	2314	2848	2588	na	na	-5.5	23.1	-9.1
Difference to Average in % *(1)*	na	na	2.0	-18.7	0.0	-9.1					
Portugal total	1.17	1.45	1.78	2.18	2.30	2.43	3.7	3.4	5.2	5.5	5.6
Consumption per capita (toe/inhab.)	0.14	0.16	0.18	0.22	0.23	0.25	2.1	2.7	4.9	5.4	5.5
Absolute Heating Degree Days	na	na	1348	1229	1466	1295	na	na	-2.3	19.3	-11.7
Difference to Average in % *(1)*	na	na	4.2	-5.0	13.3	0.1					
Spain total	6.66	10.21	11.35	12.35	13.60	13.51	7.4	1.8	2.1	10.1	-0.7
Consumption per capita (toe/inhab.)	0.19	0.27	0.29	0.32	0.35	0.35	6.3	1.2	1.9	10.0	-0.9
Absolute Heating Degree Days	na	na	1672	1477	1780	1601	na	na	-3.1	20.5	-10.1
Difference to Average in % *(1)*	na	na	7.1	-5.4	14.0	2.6					
United Kingdom total	52.82	56.28	60.98	56.44	61.81	61.03	1.1	1.3	-1.9	9.5	-1.3
Consumption per capita (toe/inhab.)	0.94	1.00	1.07	0.98	1.07	1.06	1.0	1.2	-2.2	9.2	-1.6
Absolute Heating Degree Days	na	na	2846	2367	2708	2619	na	na	-4.5	14.4	-3.3
Difference to Average in % *(1)*	na	na	3.2	-14.1	-1.8	-5.0					
European Union total	275.10	301.75	315.88	299.05	319.27	309.98	1.6	0.8	-1.4	6.8	-2.9
Consumption per capita (toe/inhab.)	0.84	0.90	0.93	0.87	0.93	0.89	1.2	0.5	-1.7	6.3	-3.4
Absolute Heating Degree Days	na	na	2534	2140	2547	2355	na	na	-4.1	19.0	-7.6
Difference to Average in % *(1)*	na	na	3.0	-13.0	3.5	-4.3					

(1) + means colder; - means warmer.

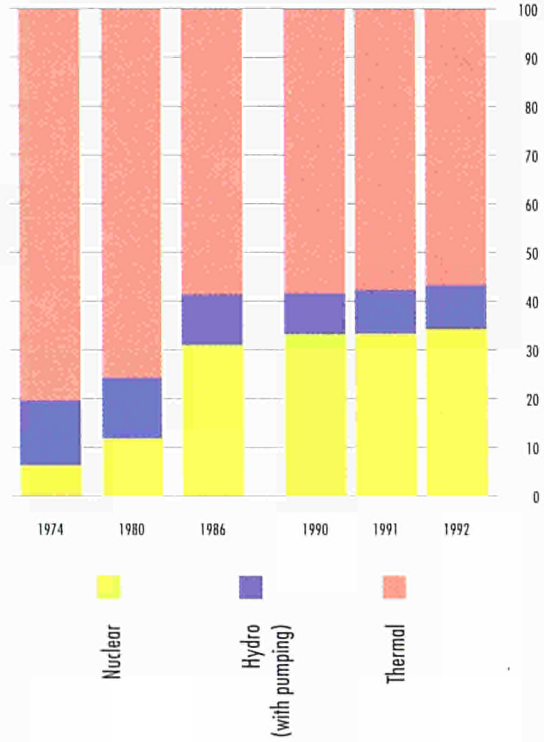
ENERGY PRICES TO CONSUMERS IN CONSTANT 1990 ECU PER TOE

Domestic & Tertiary	1985	1986	1990	1991	1992	1993	86/85	90/86	91/90	92/91	93/92
							Annual % Change				
Belgium											
Heating oil	506	286	233	244	200	210	-43.5	-5.0	4.8	-18.0	4.6
Natural gas	516	422	327	326	309	298	-18.2	-6.2	-0.3	-5.4	-3.6
Electricity	1832	1733	1560	1502	1473	1463	-5.4	-2.6	-3.7	-1.9	-0.7
Denmark											
Heating oil	662	625	640	627	579	588	-5.5	0.6	-1.9	-7.6	1.4
Natural gas	609	594	530	527	493	499	-2.6	-2.8	-0.5	-6.5	1.2
Electricity	1635	1544	1506	1597	1601	1631	-5.6	-0.6	6.1	0.2	1.9
France											
Heating oil	612	416	394	395	336	335	-32.0	-1.3	0.2	-14.9	-0.2
Natural gas	566	517	374	365	360	329	-8.6	-7.8	-2.3	-1.3	-8.8
Electricity	1528	1477	1375	1304	1292	1274	-3.4	-1.8	-5.2	-0.9	-1.4
Germany											
Heating oil	497	285	277	295	246	240	-42.7	-0.8	6.4	-16.4	-2.4
Natural gas	460	424	312	332	322	291	-8.0	-7.3	6.3	-2.9	-9.6
Electricity	1460	1507	1500	1447	1415	1408	3.2	-0.1	-3.5	-2.2	-0.5
Greece											
Heating oil	462	422	312	388	402	364	-8.7	-7.2	24.3	3.6	-9.5
Natural gas	na	na	na	na	na	0	na	na	na	na	na
Electricity	1103	1144	1082	987	958	936	3.7	-1.4	-8.7	-2.9	-2.3
Ireland											
Heating oil	694	487	424	444	362	307	-29.9	-3.4	4.7	-18.4	-15.2
Natural gas	620	610	379	374	363	350	-1.5	-11.2	-1.4	-3.0	-3.5
Electricity	1493	1507	1222	1204	1168	1136	0.9	-5.1	-1.5	-3.0	-2.8
Italy											
Heating oil	701	544	761	832	797	815	-22.5	8.8	9.4	-4.2	2.2
Natural gas	530	425	506	580	567	553	-19.8	4.5	14.8	-2.3	-2.4
Electricity	1693	1524	1436	1532	1512	1475	-10.0	-1.5	6.7	-1.3	-2.4
Luxembourg											
Heating oil	466	294	254	249	206	221	-37.0	-3.5	-2.0	-17.2	6.9
Natural gas	355	344	195	203	191	186	-3.2	-13.3	4.1	-5.5	-3.0
Electricity	1189	1156	1135	1085	1017	993	-2.8	-0.5	-4.4	-6.2	-2.3
Netherlands											
Heating oil	529	323	361	355	322	320	-38.8	2.8	-1.8	-9.2	-0.5
Natural gas	367	361	264	286	270	226	-1.6	-7.5	8.1	-5.6	-16.0
Electricity	1522	1205	1073	1031	974	962	-20.8	-2.9	-3.9	-5.5	-1.3
Portugal											
Heating oil	na	na	na	na	na	na	na	na	na	na	na
LPG	678	550	459	446	459	468	-18.9	-4.4	-2.8	2.9	2.0
Electricity	1432	1462	1347	1359	1322	1315	2.1	-2.0	0.9	-2.7	-0.5
Spain											
Heating oil	573	483	364	366	342	375	-15.7	-6.8	0.6	-6.7	9.7
Natural gas	745	736	465	460	470	482	-1.2	-10.9	-1.1	2.2	2.6
Electricity	1794	1760	1740	1748	1697	1680	-1.9	-0.3	0.5	-2.9	-1.0
United Kingdom											
Heating oil	490	311	248	222	192	202	-36.6	-5.5	-10.2	-13.8	5.7
Natural gas	303	296	259	252	249	244	-2.1	-3.3	-3.0	-0.9	-2.3
Electricity	1133	1117	959	1046	1046	996	-1.4	-3.7	9.1	0.0	-4.8
European Union											
Heating oil	611	402	300	316	257	242	-34.3	-7.0	5.2	-18.6	-5.8
Natural gas	422	387	331	348	339	318	-8.3	-3.8	5.0	-2.6	-6.2
Electricity	1461	1419	1338	1339	1317	1295	-2.9	-1.5	0.1	-1.6	-1.7

ELECTRICITY SECTOR

Electricity consumption since 1974 reports a steady increase of 2.7% per year on average. However, in the 1980s a slower growth to 1986 (2.2%) was made up by a higher rate in the second half of the decade (2.8%). Only in 1992 did electricity demand growth decrease to 1.3% as a result of the economic slow down. In 1993, there was for the first time a drop in consumption estimated at about 1% reflecting the economic recession. Apart the fact that the European Union is a slight net importer of electricity mainly from Switzerland, Norway and Sweden (0.6% of total needs in 1992), it is self-sufficient in terms of satisfying demand.

ELECTRICITY PRODUCTION BY MAIN SOURCE IN %

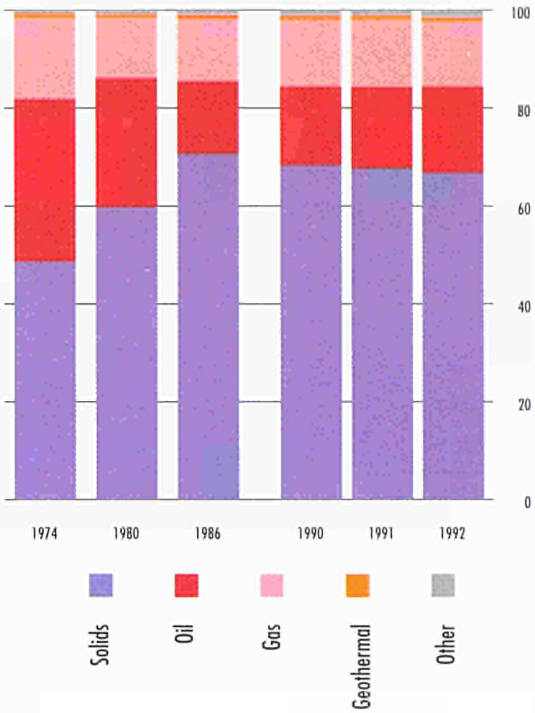


The three basic processes for Electricity generation are: Conventional thermal; Nuclear; and Hydropower. The contribution of each process has changed in the 1974 to 1992 period. While hydropower production increased slightly (0.5% per year), conventional thermal output increased by 0.7% per year and production from nuclear plants grew significantly by 12.9% per year. However, much of the increase in nuclear output was achieved between 1974 and 1980 (20.1% per year) and recently it slowed down to 3.6% from 1990 to 1992. The share of each process thus changed from 14% hydro, 80% thermal and 6% nuclear in 1974 to 9% hydro, 57% thermal and 34% nuclear in 1992.

Generating capacities in the period evolved approximately according to output. There was a general improvement in the average load factor from 47% in 1974 to 49% in 1992. This is mainly due to a better utilisation of nuclear capacities (average load factor increased from 65% to 74% in the period). For hydropower and thermal capacities there was a drop in average load factors. However these developments were not homogeneous throughout the European Union. While hydropower generation is concentrated in France, Germany, Italy, Portugal, Spain and the United Kingdom (42%, 11%, 26%, 3%, 12% and 3% of total European Union hydropower production in 1992), nuclear generation only exists in Belgium, France, Germany, Netherlands, Spain and the United Kingdom (6%, 50%, 23%, 1%, 8% and 12% of total European Union nuclear production in 1992).

The fuel mix for conventional thermal power generation has changed significantly from 1974 to 1992. Indeed, solid fuels are the only input that had a clear increase in demand for power generation (2.2% per year from 1974 to 1992). This increase however mainly occurred up to 1980 (5.7% per year). The main reason for this evolution is that oil has been replaced by solid fuels. Oil input for power production dropped by 42% overall in the period. Demand for gas has been relatively stable since 1980. The much discussed "dash for gas" which has been developing in some Member States in recent years, most notably in the United Kingdom, has not yet resulted in gas consumption returning to its 1974 level - even in the United Kingdom. Although the participation of other sources (mainly urban and industrial wastes) is small (1% of total inputs in 1992), their consumption more than doubled in the period. The average thermal efficiency for the European Union shows a steady improvement from 35.6% in 1974 to 36.9% in 1992.

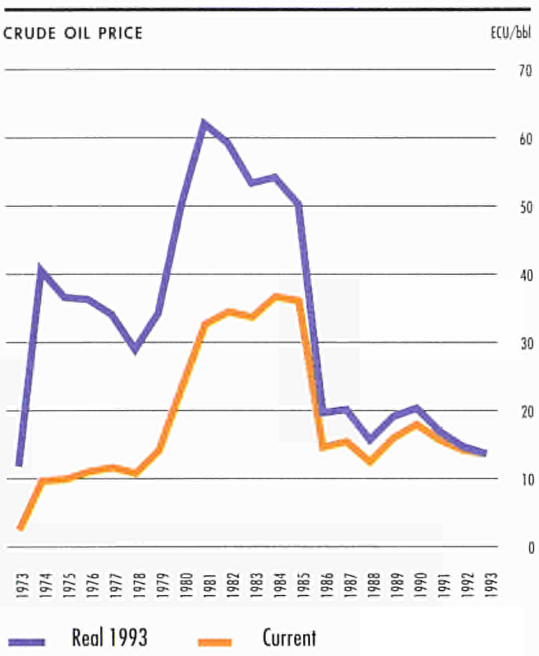
INPUTS FOR THERMAL POWER GENERATION: FUEL SHARES %



At Member State level the picture is different. While Netherlands had the highest efficiency in 1992 (41.7%), Luxembourg showed not only a continuous loss since 1980 but also the lowest level (25.2% in 1992), or 40% less than the Dutch thermal generating system. However, a word of caution is necessary. In fact, the average thermal efficiency depends to a very large extent not only on the type of technology (fuel) being used but also on the size of the capacity and on the type of load (base-load, cycling or peak) that the thermal units are satisfying. For Ireland, Italy, the Netherlands and the United Kingdom the average thermal efficiency steadily increased throughout the period.

GROSS INLAND CONSUMPTION

As a result of developments in final energy demand and in inputs for electricity generation, the gross inland consumption of the European Union grew from 1974 to 1991 by 0.8% per year on average and dropped 0.5% in 1992. Despite an increase of demand for solid fuels in power generation, the reduction of the use of these fuels in industry and in the domestic and tertiary sectors led to an overall drop of 15% in primary needs since 1980. After the two oil price shocks of the 1970s and the economic recession of the early 1980s when demand for oil dropped substantially (18% between 1974 and 1986), total oil demand steadily increased by an average 1.4% per year from 1986 to 1992. In 1986 there was a significant drop in crude oil prices



(-60% in real terms compared to 1985) followed by a slight downward trend to 1993 (see figure below). However, due to fuel switching mainly in final demand, the level of consumption in 1992 was still 9% below the 1974 level, but 10% higher than in 1986. This evolution between 1986 and 1992 results from the fact that the increase in consumption for transport (26%) and for electricity generation (30%) to a lesser extent, more than made up for the drops in industry (-19%) and in the domestic and tertiary sector (13%).

Estimates for 1993[2] indicate that total primary energy demand dropped about 1% compared to 1992. This was mainly due to the economic crisis (GDP decreased by about 0.5%).

Primary consumption of natural gas has steadily increased by 2.9% per year in the period. However, the highest growth occurred between 1974 and 1980 (4.4% per year). This development corresponds to strong increases in final demand sectors (66% increase from 1974 to 1992). For power generation, the use of natural gas, which was restrained by a Community Directive of 1975, declined between 1974 and 1986 but showed some growth to 1992. In 1992, its use for electricity generation was still 13% below the 1974 level.

Member State can be separated into different categories: The fast growers in primary energy demand with annual rates above 4% in the period (Greece and Portugal); Those where demand grew annually between 2% and 3% (Ireland and Spain); Those with slow growth at rates between 1% and 2% (France and Italy); Those with very modest growth between 0% and 1% (Belgium, Denmark, the Netherlands and the United Kingdom); and the special cases of Germany (-0.1%) and Luxembourg (-1.3%). In these two latest cases the reasons behind these evolutions are different. While in Luxembourg the drop in demand results from a significant cut in industrial activity (mainly iron & steel industry), in Germany the decrease, mainly after 1990, corresponds to the statistical inclusion of the Former East Germany. Data also show that most of the growth was concentrated on Southern European Member states where economic growth has been faster than the European Union average, specially in the cases of Portugal and Spain. However, the analysis made over the two periods, 1974 to 1986 and 1986 to 1992, give different results. While most Member States had a continuous growth in demand even with an acceleration after 1986, Denmark and Germany present a drop in demand after 1986.

[2] Final SOEC data for 1993 are not yet available

GROSS INLAND CONSUMPTION: 1993/1992 EVOLUTION

%	Solids	Oil	Natural Gas	Nuclear	Hydro *(1)*	TOTAL
Community	**-8.4**	**-1.7**	**4.1**	**5.3**	**4.4**	**-1.0**
Belgium	-20.8	-4.3	3.9	-3.8	-31.3	-5.8
Denmark	8.6	-3.1	13.7	0.0	31.3	3.5
France	-17.8	-2.4	-0.6	9.5	-1.7	1.3
Germany	-6.6	-0.7	-4.9	-4.8	0.0	-3.8
Greece	-0.8	-0.5	-4.6	0.0	7.0	-0.6
Ireland	-2.4	1.2	6.5	0.0	4.9	5.2
Italy	-18.0	-2.4	7.5	0.0	3.0	-1.1
Luxembourg	2.6	2.0	4.4	0.0	0.0	2.5
Netherlands	25.0	1.0	2.0	1.7	14.0	4.6
Portugal	8.0	-2.0	0.0	0.0	52.0	1.2
Spain	-5.6	-0.8	-6.2	3.9	28.0	-1.0
United Kingdom	-15.6	-2.5	16.5	15.5	-18.7	-0.3

(1) Includes the net imports of electricity.

GROSS INLAND CONSUMPTION

Mtoe	1974	1986	1992	86/74	92/86	92/74	1974	1986	1992
	Levels			Annual % Change			Shares in % (1)		
Belgium	44.72	44.88	50.56	0.0	2.0	0.7	4.2	3.9	4.2
Solids	12.41	8.85	9.41	-2.8	1.0	-1.5	4.3	2.9	3.7
Oil	23.88	19.40	21.00	-1.7	1.3	-0.7	4.1	4.0	3.9
Natural gas	8.37	6.63	9.05	-1.9	5.3	0.4	6.1	3.4	4.0
Denmark	17.77	18.74	18.00	0.4	-0.7	0.1	1.7	1.6	1.5
Solids	1.92	7.21	6.85	11.6	-0.9	7.3	0.7	2.4	2.7
Oil	15.85	10.48	8.62	-3.4	-3.2	-3.3	2.7	2.2	1.6
Natural gas	0.00	1.03	2.13	-	12.9	-	0.0	0.5	0.9
France	168.76	197.37	221.78	1.3	2.0	1.5	16.0	17.3	18.4
Solids	29.01	20.38	19.19	-2.9	-1.0	-2.3	10.1	6.7	7.5
Oil	116.14	84.65	89.33	-2.6	0.9	-1.4	19.7	17.5	16.7
Natural gas	14.12	24.33	28.07	4.6	2.4	3.9	10.3	12.4	12.3
Germany	337.24	360.27	333.90	0.6	-1.3	-0.1	32.0	31.6	27.7
Solids	145.30	151.32	104.72	0.3	-6.0	-1.8	50.4	49.6	40.9
Oil	147.87	124.65	131.13	-1.4	0.8	-0.7	25.1	25.7	24.5
Natural gas	37.22	49.74	56.80	2.4	2.2	2.4	27.0	25.4	24.8
Greece	10.97	17.18	22.07	3.8	4.3	4.0	1.0	1.5	1.8
Solids	2.34	6.32	8.18	8.6	4.4	7.2	0.8	2.1	3.2
Oil	8.41	10.37	13.52	1.8	4.5	2.7	1.4	2.1	2.5
Natural gas	0.00	0.10	0.13	-	4.3	-	0.0	0.1	0.1
Ireland	6.67	9.00	9.97	2.5	1.7	2.3	0.6	0.8	0.8
Solids	1.40	2.78	3.23	5.9	2.5	4.7	0.5	0.9	1.3
Oil	5.20	4.79	4.77	-0.7	-0.1	-0.5	0.9	1.0	0.9
Natural gas	0.00	1.36	1.90	-	5.7	-	0.0	0.7	0.8
Italy	126.79	134.42	155.24	0.5	2.4	1.1	12.0	11.8	12.9
Solids	9.21	14.23	12.20	3.7	-2.5	1.6	3.2	4.7	4.8
Oil	94.85	81.58	92.89	-1.2	2.2	-0.1	16.1	16.8	17.4
Natural gas	15.96	28.88	41.11	5.1	6.1	5.4	11.6	14.8	17.9
Luxembourg	4.77	3.07	3.77	-3.6	3.5	-1.3	0.5	0.3	0.3
Solids	2.72	1.29	1.00	-6.0	-4.1	-5.4	0.9	0.4	0.4
Oil	1.52	1.15	1.93	-2.3	9.0	1.3	0.3	0.2	0.4
Natural gas	0.29	0.30	0.47	0.3	7.5	2.6	0.2	0.2	0.2
Netherlands	60.11	64.05	68.80	0.5	1.2	0.8	5.7	5.6	5.7
Solids	2.95	7.05	7.92	7.5	2.0	5.6	1.0	2.3	3.1
Oil	25.85	23.13	25.64	-0.9	1.7	0.0	4.4	4.8	4.8
Natural gas	30.60	32.52	33.38	0.5	0.4	0.5	22.2	16.6	14.6
Portugal	6.90	11.13	16.69	4.1	7.0	5.0	0.7	1.0	1.4
Solids	0.43	1.12	2.96	8.3	17.6	11.3	0.1	0.4	1.2
Oil	5.79	9.03	13.07	3.8	6.4	4.6	1.0	1.9	2.4
Natural gas	0.00	0.00	0.00	-	-	-	0.0	0.0	0.0
Spain	57.59	71.29	91.81	1.8	4.3	2.6	5.5	6.3	7.6
Solids	10.60	18.40	20.81	4.7	2.1	3.8	3.7	6.0	8.1
Oil	41.32	38.33	49.77	-0.6	4.4	1.0	7.0	7.9	9.3
Natural gas	1.09	2.55	5.85	7.4	14.8	9.8	0.8	1.3	2.6
United Kingdom	212.55	207.75	214.18	-0.2	0.5	0.0	20.2	18.2	17.7
Solids	69.87	66.23	59.64	-0.4	-1.7	-0.9	24.2	21.7	23.3
Oil	102.37	76.90	83.28	-2.4	1.3	-1.1	17.4	15.9	15.6
Natural gas	30.04	48.17	50.17	4.0	0.7	2.9	21.8	24.6	21.9
European Union	1054.64	1139.15	1206.77	0.6	1.0	0.8	100.0	100.0	100.0
Solids	288.16	305.17	256.11	0.5	-2.9	-0.7	100.0	100.0	100.0
Oil	589.04	484.45	534.95	-1.6	1.7	-0.5	100.0	100.0	100.0
Natural gas	137.68	195.61	229.05	3.0	2.7	2.9	100.0	100.0	100.0

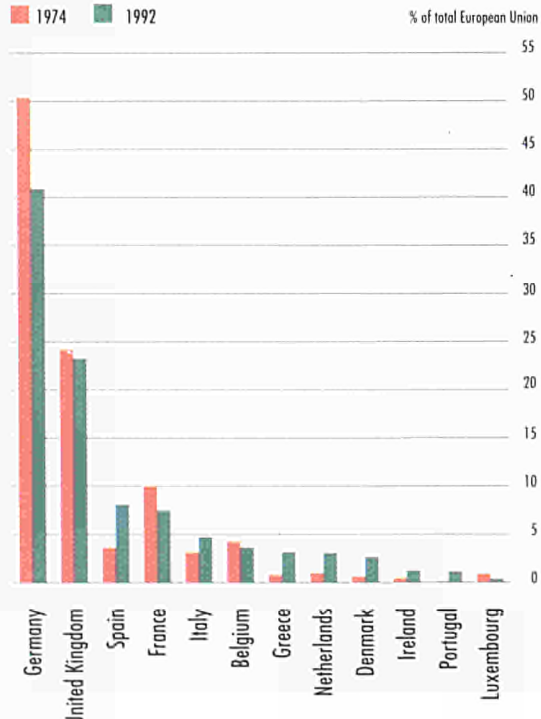
(1) Percentage of total European Union.

SHARES OF GROSS INLAND CONSUMPTION

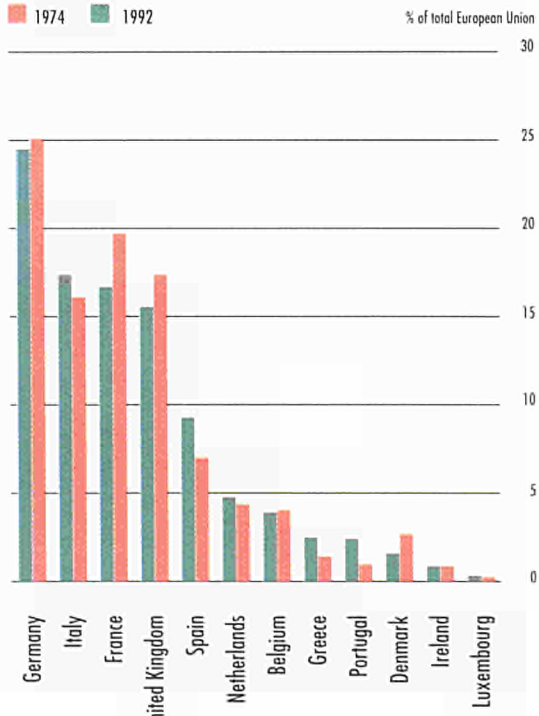
Analysing developments by Member States and by fuel there are some general conclusions. Primary demand for solid fuels is highly dependent on the needs of the electricity generation sector. This is generally true for all Member States. Given these reasons solid fuels demand increased in Denmark, Greece, Ireland, Italy, the Netherlands, Portugal and Spain. Germany and the United Kingdom, which together had about three quarters of total solid fuels demand of the European Union in 1974, accounted for less than two thirds in 1992.

In the case of oil, in general there was a clear change in behaviour after 1986. Those Member States with negative growth prior to 1986 stabilised or even increased their demand for oil after that year and those with positive growth rates in the first period accelerated their oil demand growth after 1986. This seems to be the result of the oil price drop of 1986 combined with faster economic growth.

SHARES OF SOLIDS INLAND CONSUMPTION



SHARES OF OIL INLAND CONSUMPTION

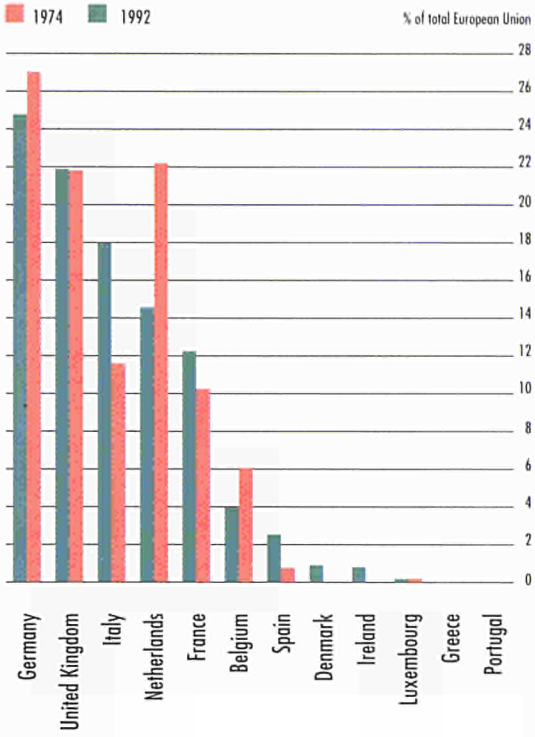


Natural gas demand grew the fastest among primary fossil fuels and in general in all Member States. In the period natural gas penetrated the market in Denmark, Greece and Ireland. Portugal is the only Member state where natural gas had not yet entered the market in 1992. Growth in demand prior to and after 1986 are not similar across Member states and it seems that there was some switching against oil in some cases.

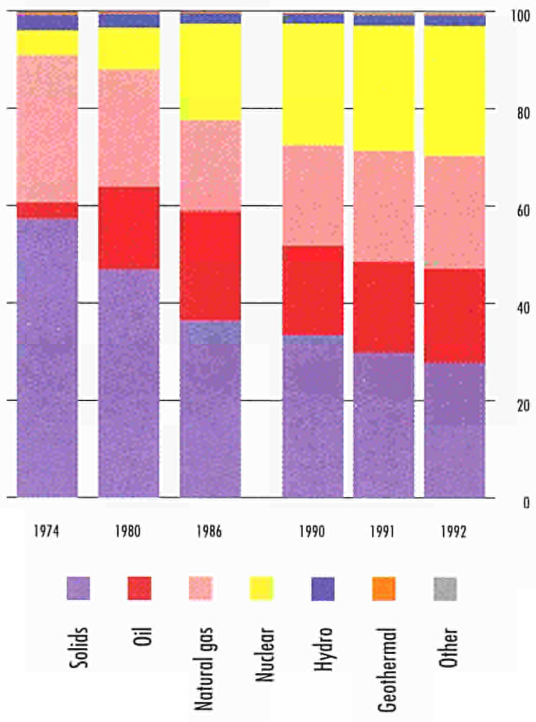
INDIGENOUS PRODUCTION

Domestic production of energy in the European Union as a whole peaked at 682 Mtoe in 1986, some 60% higher than in 1974. This is due to a very significant increase in oil production that grew more than ten fold in this period more than making up for the loss in solid fuels production. After 1986, however, oil production dropped substantially to 1990 (-24% compared to 1986) and in 1992 was still 21% below the 1986 peak. While the production of natural gas shows an increase from 1974 to 1992, that of nuclear had significant increases up to 1986. After 1986, the increase in nuclear output has been slowing down as only a small number of units have been commissioned.

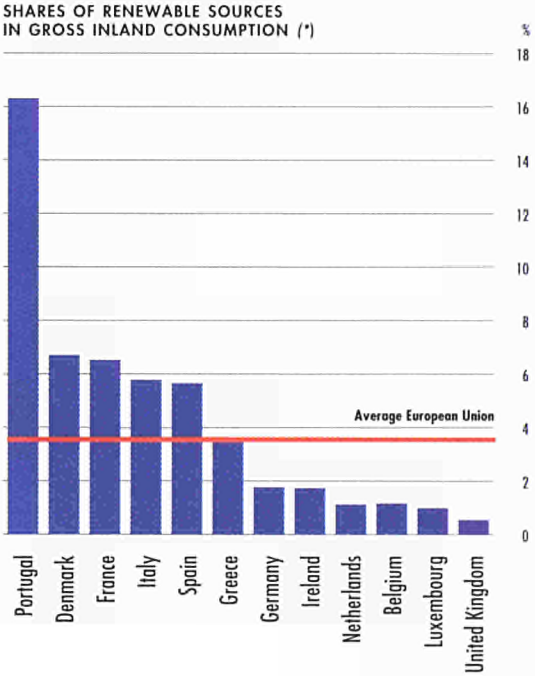
SHARES OF GAS INLAND CONSUMPTION



PRIMARY PRODUCTION: FUEL SHARES



SHARES OF RENEWABLE SOURCES IN GROSS INLAND CONSUMPTION (*)



(*). Gross inland Consumption according to the new SOEC accounting system

The production of renewable energy sources (as shown in the summary energy balance) shows a slight upward trend. In 1992, these sources contributed 3% to total production. However, if we account for all renewable energy sources (new SOEC accounting system) the share in total production was almost 7%. In this new accounting system the shares of the different non-renewable sources in total production in 1992 were: Solids 27%; Nuclear 27%; Natural gas 22%; Oil 18%.

RENEWABLE ENERGY SOURCES IN 1992 (THOUSAND TOE)

	Old SOEC Data Base (1)					Additional SOEC Data Base (2)				Total
	Hydro	Wind	Other (3)	Geother.	Sub-Total	Biomass	Geother.	Solar	Sub-Total	Renewables
Production = Gross Inland Consumption										
Belgium	29	1	324	0	354	244	1	0	245	599
Denmark	2	78	0	0	80	1206	1	3	1210	1290
France	5885	0	193	0	6078	8832	155	15	9002	15080
Germany	1489	3	1221	0	2713	3283	7	6	3296	6009
Greece	189	1	0	0	190	537	3	75	615	805
Ireland	70	0	0	0	70	107	0	0	107	177
Italy	3629	0	395	1977	6001	2973	192	7	3172	9173
Luxembourg	6	0	26	0	32	6	0	0	6	38
Netherlands	10	13	224	0	247	539	0	2	541	787
Portugal	399	1	151	0	551	2571	1	25	2597	3148
Spain	1627	0	99	0	1726	3655	2	22	3679	5405
United Kingdom	474	3	425	0	902	307	1	5	313	1215
European Union	**13809**	**99**	**3058**	**1977**	**18943**	**24260**	**363**	**160**	**24783**	**43726**
Inputs to Power Generation (4)										
Belgium	29	1	324	0	354	0	0	0	0	354
Denmark	2	78	0	0	80	700	0	0	700	780
France	5885	0	193	0	6078	174	0	0	174	6252
Germany	1489	3	1221	0	2713	477	0	0	477	3190
Greece	189	1	0	0	190	0	0	0	0	190
Ireland	70	0	0	0	70	0	0	0	0	70
Italy	3629	0	395	1977	6001	0	0	0	0	6001
Luxembourg	6	0	26	0	32	0	0	0	0	32
Netherlands	10	13	224	0	247	54	0	0	54	300
Portugal	399	1	151	0	551	0	0	0	0	551
Spain	1627	0	99	0	1726	1	0	0	1	1727
United Kingdom	474	3	425	0	902	87	0	0	87	989
European Union	**13809**	**99**	**3058**	**1977**	**18943**	**1493**	**0**	**0**	**1493**	**20436**
Final Energy Consumption										
Belgium	-	-	0	-	0	244	1	0	245	245
Denmark	-	-	0	-	0	506	1	3	510	510
France	-	-	0	-	0	8660	154	14	8828	8828
Germany	-	-	0	-	0	2807	6	6	2819	2819
Greece	-	-	0	-	0	538	3	74	615	615
Ireland	-	-	0	-	0	107	0	0	107	107
Italy	-	-	0	-	0	2961	192	7	3160	3160
Luxembourg	-	-	0	-	0	6	0	0	6	6
Netherlands	-	-	0	-	0	465	0	1	466	466
Portugal	-	-	0	-	0	2572	1	24	2597	2597
Spain	-	-	0	-	0	3654	2	22	3678	3678
United Kingdom	-	-	0	-	0	221	0	5	226	226
European Union	**-**	**-**	**0**	**-**	**0**	**22741**	**360**	**156**	**23257**	**23257**

(1) Data already included in the Summary Energy Balances; Geothermal data are only volumes related to electricity production.

(2) Data recently collected by the SOEC, not yet included in the Summary Energy Balances; Geothermal data are only volumes related to non-electricity production.

(3) Mainly industrial and urban wastes.

(4) Includes inputs in District Heating plants.

SELF-SUFFICIENCY

The degree of self-sufficiency of the European Union as a whole increased significantly from 1974 to 1986. Since then it has fluctuated around the 50% level. The Netherlands and the United Kingdom present the highest degrees of self-sufficiency, although in the first case there is a downward trend. Denmark, which was totally dependent on imports in 1974, increased its level of self-sufficiency to almost 60% in 1992. In the cases of Belgium, France and Spain the levels of self-sufficiency are mainly made up of nuclear energy.

DEGREE OF SELF-SUFFICIENCY IN ENERGY SUPPLY
(TOTAL DOMESTIC PRODUCTION / GROSS CONSUMPTION IN %)

	1974	1980	1986	1990	1991	1992
Belgium	8	14	28	23	22	20
Denmark	0	1	25	50	57	59
France	14	21	44	44	44	45
Germany	53	49	55	55	47	45
Greece	4	15	29	35	34	28
Ireland	12	20	25	30	33	33
Italy	14	14	17	14	17	15
Luxembourg	2	0	0	1	1	0
Netherlands	93	93	82	77	82	83
Portugal	10	1	7	3	6	4
Spain	23	24	39	33	33	30
United Kingdom	48	94	117	97	95	96
Average European Union	38	46	57	52	50	49

The contribution of each Member State to European Union domestic production and the respective evolutions are quite heterogeneous. While in 1974 Germany accounted for 42% of total, it only accounted for 25% in 1992. This is mainly due to significant cuts in hard coal production. On the other hand, the United Kingdom, which accounted for 25% in 1974, represented 36% in 1986 and dropped to about one third of the total in 1992. This was mainly the result of crude oil production increases in the United kingdom's continental shelf up to 1986 combined with cuts in hard coal production. In the case of France, which steadily increased its contribution, a significant increase in nuclear output more than made up for the cuts in coal production and drop in natural gas output. To a less extent, this is also the case of Belgium where nuclear was developed and the last coal mine was shut in 1993. Spain also increased its contribution mainly due to expansion of nuclear energy. In the case of the Netherlands, its share of the total decreased due to increases in other Member States. Indeed, Dutch domestic production has been fairly stable throughout the period.

CONTRIBUTION TO TOTAL EUROPEAN UNION DOMESTIC PRODUCTION (SHARES IN %)

	1974	1980	1986	1990	1991	1992
Belgium	1.3	1.4	2.0	1.9	1.9	1.8
Denmark	0.0	0.1	0.8	1.4	1.7	1.8
France	7.8	8.0	12.8	15.3	16.1	16.4
Germany	41.6	34.1	30.1	29.5	25.6	25.0
Greece	0.5	0.6	1.0	1.3	1.3	1.3
Ireland	0.2	0.3	0.4	0.5	0.5	0.5
Italy	4.8	3.5	3.5	3.8	3.9	4.1
Luxembourg	0.0	0.0	0.0	0.0	0.0	0.0
Netherlands	15.5	12.7	9.1	9.4	10.6	10.6
Portugal	0.2	0.1	0.1	0.2	0.2	0.1
Spain	3.4	3.3	4.1	4.7	4.7	4.6
United Kingdom	24.6	35.8	36.1	32.1	33.5	33.6

EXTERNAL SUPPLIES

Closing the gap between domestic production and gross consumption, the European Union took about 51% of its total energy needs from third countries in 1992 (67% in 1974). For solid fuels some 32% of total needs came from external suppliers in 1992 (15% in 1974). Of those 32%, 11% came from the United States, 7% from South Africa, 5% from Australia, 3% from Poland and the former USSR and 4% from diverse sources. In terms of crude oil the European Union depended on external supplies for as much as 78% in 1992 (98% in 1974). Of these external supplies 54% came from OPEC, 13% from Norway, 11% from the former USSR and 22% from diverse sources. The external dependency of the European Union in terms of natural gas was 36% (6% in 1974). In this case there are three suppliers with the following shares in the Union's total gas needs in 1992: Former USSR with 16%; Algeria with 11%; and Norway with 9%. However, while supplies from Norway have been stable in the 1980s, supplies from the former USSR doubled and those from Algeria were multiplied by 2.5 during the last decade. But this picture is not applicable to each Member State. For example, while German gas imports depend on both the former USSR and Norway, those of Spain depend totally on Algeria.

MAIN INDICATORS

The European Union, after a certain loss in its overall **energy efficiency** in 1991 (as measured by the energy intensity of its economy), had again an improvement in 1992 of 1.6%. In 1993 intensity is expected to fall again at about 0.6%. However, a word of caution is necessary when looking at energy intensity behaviour. Intensity is a ratio between energy consumption and GDP, and the first parameter is highly influenced by the weather conditions without any reflection at the GDP level. In fact, a great deal of the 1991 increase compared to 1990 is due to the significant differences in weather conditions. Also, this overall indicator is the result of different developments in the main consuming sectors, including the power generation. Indeed, intensity improvements in industry and to a less extent in power generation were the main drivers for the evolution of the overall energy intensity. Significant losses occurred in the transport sector. The analysis of the behaviour of the domestic and tertiary sectors is difficult due to lack of sufficient statistical data. While demand in the domestic sector is dominated by space heating needs more linked to weather conditions than to economic growth, consumption in the services sector over the past decades rose due to significant activity growth.

Throughout the period there are three Member States where energy intensity increased (Greece, Portugal and Spain). As already stated, this evolution results from higher economic growth mainly based on a strong industrialisation and on improved standards of living. Indeed, the evolution and the level of this ratio seems highly dependent on the stage of economic development of each Member State in the starting year. In 1974, while Denmark and Italy present the lowest intensity levels, although for different reasons (High income per capita in Denmark and comparatively less space heating needs in Italy), Belgium had the highest ratio. In 1992, Denmark continued to have the lowest intensity while Portugal had the highest value. Apart from Germany, where this indicator is highly influenced by structural changes after 1990 (unification), France and the United Kingdom had similar trajectories for the indicator, although the rates of gains and the levels differ.

INDICATORS

	1974	1986	1990	1992	86/74	90/86	92/90	92/74
					Annual % Change			
Belgium								
Gross Inl Cons./GDP (toe/1985 MECU)	503	419	386	398	-1.5	-2.1	1.5	-1.3
Gross Inl Cons./Capita (kgoe/inhabitant)	4578	4551	4766	5053	0.0	1.2	3.0	0.5
Electricity Generated/Capita (kWh/inhabitant)	4374	5949	7107	7220	2.6	4.5	0.8	2.8
Denmark								
Gross Inl Cons./GDP (toe/1985 MECU)	297	236	207	210	-1.9	-3.2	0.8	-1.9
Gross Inl Cons./Capita (kgoe/inhabitant)	3522	3659	3332	3486	0.3	-2.3	2.3	-0.1
Electricity Generated/Capita (kWh/inhabitant)	3715	6001	5010	5974	4.1	-4.4	9.2	2.7
France								
Gross Inl Cons./GDP (toe/1985 MECU)	306	279	265	269	-0.8	-1.2	0.7	-0.7
Gross Inl Cons./Capita (kgoe/inhabitant)	3217	3563	3745	3866	0.9	1.3	1.6	1.0
Electricity Generated/Capita (kWh/inhabitant)	3587	6548	7404	8067	5.1	3.1	4.4	4.6
Germany								
Gross Inl Cons./GDP (toe/1985 MECU)	457	391	347	312	-1.3	-3.0	-5.0	-2.1
Gross Inl Cons./Capita (kgoe/inhabitant)	4295	4638	4510	4167	0.6	-0.7	-3.9	-0.2
Electricity Generated/Capita (kWh/inhabitant)	4992	6738	6964	6701	2.5	0.8	-1.9	1.6
Greece								
Gross Inl Cons./GDP (toe/1985 MECU)	353	387	449	449	0.8	3.8	0.0	1.3
Gross Inl Cons./Capita (kgoe/inhabitant)	1224	1724	2111	2147	2.9	5.2	0.8	3.2
Electricity Generated/Capita (kWh/inhabitant)	1675	2838	3469	3638	4.5	5.1	2.4	4.4
Ireland								
Gross Inl Cons./GDP (toe/1985 MECU)	401	364	319	311	-0.8	-3.2	-1.4	-1.4
Gross Inl Cons./Capita (kgoe/inhabitant)	2134	2543	2867	2804	1.5	3.0	-1.1	1.5
Electricity Generated/Capita (kWh/inhabitant)	2510	3572	4143	4503	3.0	3.8	4.3	3.3
Italy								
Gross Inl Cons./GDP (toe/1985 MECU)	298	233	233	232	-2.0	-0.1	-0.1	-1.4
Gross Inl Cons./Capita (kgoe/inhabitant)	2301	2348	2624	2680	0.2	2.8	1.1	0.9
Electricity Generated/Capita (kWh/inhabitant)	2701	3359	3761	3906	1.8	2.9	1.9	2.1
Luxembourg								
Gross Inl Cons./GDP (toe/1985 MECU)	1234	640	616	630	-5.3	-1.0	1.2	-3.7
Gross Inl Cons./Capita (kgoe/inhabitant)	13356	8288	9248	9787	-3.9	2.8	2.9	-1.7
Electricity Generated/Capita (kWh/inhabitant)	5794	2756	3609	3109	-6.0	7.0	-7.2	-3.4
Netherlands								
Gross Inl Cons./GDP (toe/1985 MECU)	421	368	339	350	-1.1	-2.0	1.6	-1.0
Gross Inl Cons./Capita (kgoe/inhabitant)	4437	4395	4440	4529	-0.1	0.3	1.0	0.1
Electricity Generated/Capita (kWh/inhabitant)	4085	4608	4806	5081	1.0	1.1	2.8	1.2
Portugal								
Gross Inl Cons./GDP (toe/1985 MECU)	331	395	446	474	1.5	3.1	3.0	2.0
Gross Inl Cons./Capita (kgoe/inhabitant)	813	1149	1539	1699	2.9	7.6	5.1	4.2
Electricity Generated/Capita (kWh/inhabitant)	1264	2104	2905	3061	4.3	8.4	2.7	5.0
Spain								
Gross Inl Cons./GDP (toe/1985 MECU)	313	316	314	321	0.1	-0.2	1.1	0.2
Gross Inl Cons./Capita (kgoe/inhabitant)	1639	1844	2193	2346	1.0	4.4	3.4	2.0
Electricity Generated/Capita (kWh/inhabitant)	2300	3341	3894	4055	3.2	3.9	2.0	3.2
United Kingdom								
Gross Inl Cons./GDP (toe/1985 MECU)	422	330	299	309	-2.0	-2.5	1.7	-1.7
Gross Inl Cons./Capita (kgoe/inhabitant)	3780	3660	3675	3709	-0.3	0.1	0.5	-0.1
Electricity Generated/Capita (kWh/inhabitant)	4853	5312	5555	5660	0.8	1.1	0.9	0.9
European Union								
Gross Inl Cons./GDP (toe/1985 MECU)	381	323	301	297	-1.4	-1.8	-0.7	-1.4
Gross Inl Cons./Capita (kgoe/inhabitant)	3228	3362	3485	3481	0.3	0.9	-0.1	0.4
Electricity Generated/Capita (kWh/inhabitant)	3780	5100	5545	5701	2.5	2.1	1.4	2.3

The indicators per capita translate to a large extent the level of living standards, space heating needs and the structural changes of the European economies towards more electricity-intensive activities.

In terms of energy consumption per capita, given the differences in living standards and space heating needs (where geography is the key element), Portugal has the lowest level with 1.7 toe/inhabitant in 1992 while Belgium had the highest with 5.1 toe/inhabitant, or almost three times higher. However, in the 1974 to 1992 period, Portugal has been increasing its per capita consumption some eight times faster than Belgium. This illustrates the differences between an economy growing from a low level of development and an already stable economic system. Member States can be divided into three categories when looking at the growth in energy demand per capita: Those growing more than 2% per year - Greece, Portugal and Spain; Those increasing between 0% and 2% - Belgium, France, Ireland, Italy and the Netherlands; and those that slightly decreased - Denmark, Germany and the United Kingdom. Luxembourg constitutes a special case given both the weight of industry in total demand and the share of foreign consumers for road fuels.

Except for Luxembourg, electricity generation per capita increased in all Member States throughout the period. For this indicator, Portugal also shows the lowest per capita ratio with 3061 kWh/inhabitant against France with 8067 kWh in 1992, 2.6 times higher. Portugal also displays the fastest rate of growth with 5% per year on average in the period, or over five times faster than the United Kingdom (0.9% per year). In terms of growth, Member States can be divided into three categories: Those growing faster than 3% per year - France, Greece, Ireland, Portugal and Spain; Those with growth rates between 2% and 3% per year - Belgium, Denmark and Italy; and those below 2% per year - Germany, the Netherlands and the United Kingdom.

Although CO2 emissions do not constitute an energy indicator, they are shown given their importance in the current political debate. In addition, given the global character and effect of these emissions, the calculation of total emissions was done according to three different methods, although all based on the energy balance and with a bottom-up approach: first, the traditional method where emissions from the transport sector include those produced by aircraft; a second approach where emissions from international maritime navigation (bunkers) are also included; and a third where emissions from both air and maritime navigation are excluded and thus only include those emissions produced in the territory of each member state are considered. This last method, like any other, is not perfect. In fact, air transport consumptio includes fuel for all domestic flights, and this is relatively important for large Member States, such as France, Germany, Italy, Spain and the United Kingdom. On the other hand, the traditional method excluding all bunker fuels, overlooks some coastal fishing that benefitsfrom a dutyfree fuel regime consumption which is, in many cases, statistically included in bunkers. In conclusion, the method including emissions from all sectors (domestic market, air transport and bunkers) is important when discussing total levels of emissions at World level. On the other hand, when discussing issues such as burden sharing, it seems useful to analyse those emissions associated only to activities within the territory of each Member State.

In general terms, total European Union CO2 emissions decreased from 1974 to 1986 and increased again to 1991, but to a level similar to that of 1974. In 1992, emissions decreased slightly by 0.1%. In the three calculation methods Germany ranks first with a share around 30% of total. The second Member State is the United Kingdom with a share of around 20%. Italy and France come third and fourth with shares of about 12% to 13% in 1992 but with different developments: while France continuously decreased its CO2 emissions (22% less in 1992 than in 1974), Italy shows a steady increase up to 1991 (17% from 1974 to 1992). These four Member States together account four three quarters of total European Union emissions. In the "Cohesion" Member States - Portugal, Greece, Spain and Ireland - CO2 emissions grew fastest from 1974 to 1992 (up by 152%, 112%, 48% and 47% respectively).

CO2 EMISSIONS — TRADITIONAL CALCULATION

	1974	1980	1986	1990	1991	1992	1974	1980	1986	1990	1991	1992
	Million tonnes of CO2						% Share of European Union					
Belgium	144	133	104	111	117	117	4.7	4.2	3.6	3.7	3.8	3.9
Denmark	54	63	61	52	61	56	1.8	2.0	2.1	1.7	2.0	1.9
France	481	477	365	368	383	376	15.8	15.2	12.4	12.2	12.5	12.5
Germany	1023	1063	1024	968	964	928	33.5	33.8	34.8	32.2	31.5	30.8
Greece	35	47	58	73	73	74	1.1	1.5	2.0	2.4	2.4	2.5
Ireland	21	25	28	31	32	31	0.7	0.8	1.0	1.0	1.0	1.0
Italy	337	367	355	402	401	393	11.0	11.7	12.1	13.4	13.1	13.1
Luxembourg	22	15	12	12	13	13	0.7	0.5	0.4	0.4	0.4	0.4
Netherlands	139	153	151	157	162	162	4.6	4.9	5.1	5.2	5.3	5.4
Portugal	18	25	29	40	42	46	0.6	0.8	1.0	1.3	1.4	1.5
Spain	157	198	183	210	224	234	5.1	6.3	6.2	7.0	7.3	7.8
United Kingdom	622	576	570	580	591	580	20.4	18.3	19.4	19.3	19.3	19.3
European Union	3051	3142	2938	3006	3061	3009	100.0	100.0	100.0	100.0	100.0	100.0

CO2 EMISSIONS — TOTAL INCLUDING BUNKERS

	1974	1980	1986	1990	1991	1992	1974	1980	1986	1990	1991	1992
	Million tonnes of CO2						% Share of European Union					
Belgium	152	141	114	125	130	130	4.8	4.4	3.7	4.0	4.1	4.2
Denmark	55	65	62	55	64	59	1.7	2.0	2.0	1.8	2.0	1.9
France	497	490	372	376	391	384	15.7	15.1	12.3	12.1	12.4	12.3
Germany	1034	1074	1038	976	971	934	32.7	33.2	34.2	31.4	30.7	30.0
Greece	37	50	64	81	80	83	1.2	1.5	2.1	2.6	2.5	2.7
Ireland	21	25	28	31	32	31	0.7	0.8	0.9	1.0	1.0	1.0
Italy	356	380	367	411	409	401	11.3	11.8	12.1	13.2	12.9	12.9
Luxembourg	22	15	12	12	13	13	0.7	0.5	0.4	0.4	0.4	0.4
Netherlands	168	183	182	192	197	198	5.4	5.6	6.0	6.2	6.2	6.4
Portugal	21	26	30	42	44	48	0.7	0.8	1.0	1.3	1.4	1.5
Spain	160	204	194	222	236	246	5.1	6.3	6.4	7.1	7.5	7.9
United Kingdom	636	582	577	588	598	588	20.1	18.0	19.0	18.9	18.9	18.9
European Union	3159	3234	3039	3112	3166	3114	100.0	100.0	100.0	100.0	100.0	100.0

CO2 EMISSIONS — EXCLUDING BUNKERS AND AIR TRANSPORT

	1974	1980	1986	1990	1991	1992	1974	1980	1986	1990	1991	1992
	Million tonnes of CO2						% Share of European Union					
Belgium	142	132	103	108	114	114	4.7	4.3	3.6	3.7	3.8	3.9
Denmark	52	62	59	50	59	54	1.7	2.0	2.0	1.7	2.0	1.8
France	475	469	356	356	371	363	15.8	15.2	12.4	12.2	12.5	12.4
Germany	1014	1054	1011	952	949	912	33.8	34.1	35.2	32.5	31.8	31.2
Greece	33	44	55	69	69	70	1.1	1.4	1.9	2.4	2.3	2.4
Ireland	20	24	27	30	31	30	0.7	0.8	0.9	1.0	1.0	1.0
Italy	332	363	350	397	394	387	11.1	11.7	12.2	13.5	13.2	13.2
Luxembourg	22	14	11	12	13	12	0.7	0.5	0.4	0.4	0.4	0.4
Netherlands	137	150	147	153	156	156	4.5	4.8	5.1	5.2	5.2	5.3
Portugal	16	24	27	38	40	44	0.5	0.8	0.9	1.3	1.3	1.5
Spain	151	193	177	203	214	225	5.0	6.2	6.2	6.9	7.2	7.7
United Kingdom	610	561	553	560	571	559	20.3	18.2	19.2	19.1	19.2	19.1
European Union	3004	3089	2877	2928	2982	2928	100.0	100.0	100.0	100.0	100.0	100.0

Looking at CO2 emissions by sector at European Union level, the first conclusion is that emissions from bunkers have remained relatively stable while those from air transport almost doubled their share from 1.4% in 1974 to 2.6% in 1992. The largest sector in terms of emissions is the electricity generation sector. After a drop in emissions between 1980 and 1986, mainly due to the expansion of nuclear energy, there has been an upward trend. The share of emissions from this sector in total has been relatively stable since 1980 around 31%. Within the final demand sectors, transport (excluding air transport) is the only one with steadily increasing emissions (3% per year in the period), while the domestic and tertiary sectors show a downward trend. Industry is the sector with the greatest fall in CO2 emissions (-2.8% per year in the period). However, much of the fall in industry is due to a general drop in demand, to the penetration of electricity and to fuel switching away from more CO2 intensive fuels. In the domestic and tertiary sectors, where overall energy consumption increased, the evolution of CO2 emissions is due mainly to strong penetration of electricity complemented by fuel switching. Therefore, there was a shift of CO2 emissions from industry and domestic and tertiary sectors onto power generation to some extent. But in fact, increased emissions from all transport were almost three times the increase in emissions from power generation.

To a very large extent, the different behaviour of Member States in terms of total CO2 emissions is a function of developments of the fuel mix for power generation. This is measured by the CO2 intensity of the different systems (for example, France with 93 tonnes of CO2 per GWh produced in 1992 against 869 tonnes of CO2 per GWh produced in Denmark). Luxembourg constitutes a special case, given the type of electricity load (peak), which its thermal units must satisfy leading to a rather low fuel efficiency. In those Member States where nuclear energy was developed, such as in Belgium and France, CO2 emissions from power generation dropped significantly by 48% and 60% in the period from 1980 to 1986 respectively. In those cases where the power generation relies mainly on solid fuels CO2 emissions increased rapidly, such as in Denmark and Ireland (73% and 82% respectively during 1974 to 1992). For those Member States where hydro has been losing share in total electricity generation, CO2 emissions increased also rapidly (seven fold in the case of Portugal). Germany and the United Kingdom are the two only cases, although for different reasons, where CO2 emissions from power generation are either relatively stable or show a downward trend since 1980.

CO2 EMISSIONS

European Union	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	92/90	92/74
	Million tonnes of CO2						% Annual Change				
Total	3159	3234	3039	3112	3166	3114	0.4	-1.0	0.6	0.0	-0.1
Bunkers	109	93	101	107	105	105	-2.6	1.4	1.3	-0.5	-0.2
Air Transport	44	54	62	79	79	82	3.4	2.4	6.1	2.0	3.5
Transformation	1012	1151	1037	1104	1139	1111	2.2	-1.7	1.6	0.3	0.5
Power Generation	864	1007	911	974	999	977	2.6	-1.7	1.7	0.1	0.7
Energy Sector	148	143	125	129	139	134	-0.5	-2.2	0.7	1.9	-0.5
Final Demand Sectors	1994	1937	1840	1823	1843	1816	-0.5	-0.9	-0.2	-0.2	-0.5
Industry	880	735	594	574	539	531	-3.0	-3.5	-0.9	-3.8	-2.8
Transport	386	472	527	632	641	657	3.4	1.8	4.6	2.0	3.0
Domestic and Tertiary	728	730	719	618	663	629	0.1	-0.3	-3.7	0.8	-0.8

CO2 EMISSIONS FROM POWER GENERATION

Million tonnes of CO2	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Belgium total	35	34	18	25	25	24	-0.5	-10.3	8.8	1.5	-2.5
Share in European Union (%)	4.0	3.3	1.9	2.5	2.5	2.5	-3.1	-8.8	7.0	-1.0	-0.3
Intensity (t of Co2/GWh generated)	813	627	299	347	347	337	-4.2	-11.6	3.8	0.0	-3.0
Denmark total	16	25	28	23	31	27	8.3	1.7	-4.6	36.6	-14.6
Share in European Union (%)	1.8	2.5	3.0	2.4	3.1	2.7	5.6	3.4	-6.2	33.3	-12.6
Intensity (t of Co2/GWh generated)	829	925	903	893	864	869	1.8	-0.4	-0.3	-3.2	0.6
France total	92	106	43	44	53	43	2.3	-14.1	1.0	19.2	-17.9
Share in European Union (%)	10.7	10.5	4.7	4.5	5.3	4.4	-0.3	-12.6	-0.7	16.3	-16.0
Intensity (t of Co2/GWh generated)	490	410	117	105	116	93	-2.9	-18.8	-2.7	10.2	-19.4
Germany total	329	376	370	365	375	361	2.2	-0.2	-0.4	2.9	-4.0
Share in European Union (%)	38.1	37.3	40.6	37.5	37.6	36.9	-0.4	1.4	-2.0	0.4	-1.7
Intensity (t of Co2/GWh generated)	841	803	707	664	696	671	-0.8	-2.1	-1.6	4.9	-3.6
Greece total	12	18	27	36	35	37	6.7	7.0	7.5	-2.1	4.4
Share in European Union (%)	1.4	1.8	2.9	3.7	3.5	3.7	4.0	8.8	5.7	-4.5	6.8
Intensity (t of Co2/GWh generated)	805	788	949	1022	978	977	-0.4	3.1	1.9	-4.3	-0.1
Ireland total	7	8	9	11	11	12	3.9	1.5	5.2	3.5	5.6
Share in European Union (%)	0.8	0.8	1.0	1.1	1.1	1.2	1.2	3.2	3.5	1.0	8.1
Intensity (t of Co2/GWh generated)	837	757	711	758	753	752	-1.7	-1.1	1.6	-0.8	-0.1
Italy total	75	97	96	123	119	120	4.3	-0.1	6.3	-3.3	0.6
Share in European Union (%)	8.7	9.6	10.6	12.6	11.9	12.3	1.7	1.6	4.6	-5.7	2.9
Intensity (t of Co2/GWh generated)	503	520	501	568	536	529	0.6	-0.6	3.2	-5.6	-1.3
Luxembourg total	3	2	1	2	2	2	-7.1	-5.5	6.9	3.9	-3.7
Share in European Union (%)	0.3	0.2	0.1	0.2	0.2	0.2	-9.5	-3.9	5.1	1.4	-1.4
Intensity (t of Co2/GWh generated)	1220	1453	1132	1091	1130	1258	2.9	-4.1	-0.9	3.5	11.3
Netherlands total	31	39	40	45	46	46	3.7	0.3	3.5	0.3	1.9
Share in European Union (%)	3.6	3.9	4.3	4.7	4.6	4.8	1.0	2.0	1.8	-2.1	4.3
Intensity (t of Co2/GWh generated)	566	600	590	633	614	602	1.0	-0.3	1.8	-2.9	-2.0
Portugal total	3	5	9	15	16	19	12.1	9.8	14.0	6.3	18.5
Share in European Union (%)	0.3	0.5	1.0	1.6	1.6	2.0	9.2	11.7	12.1	3.7	21.3
Intensity (t of Co2/GWh generated)	242	337	443	535	543	639	5.7	4.7	4.8	1.4	17.7
Spain total	42	72	58	65	67	77	9.7	-3.6	3.0	2.2	14.6
Share in European Union (%)	4.8	7.2	6.4	6.7	6.7	7.8	6.9	-2.0	1.3	-0.3	17.3
Intensity (t of Co2/GWh generated)	515	656	450	431	429	483	4.1	-6.1	-1.1	-0.4	12.6
United kingdom total	220	227	213	220	219	209	0.5	-1.0	0.8	-0.7	-4.3
Share in European Union (%)	25.5	22.5	23.4	22.6	21.9	21.4	-2.0	0.7	-0.9	-3.1	-2.1
Intensity (t of Co2/GWh generated)	806	796	707	691	678	640	-0.2	-1.9	-0.6	-1.9	-5.5
European Union total	864	1007	911	974	999	977	2.6	-1.7	1.7	0.1	0.7
Intensity (t of Co2/GWh generated)	699	671	527	512	510	494	-0.7	-3.9	-0.8	-0.3	-3.1

Energy developments in each Member State are described in the following summary energy balances.

EUROPEAN UNION: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	428.86	547.37	681.87	636.22	631.05	625.46	4.2	3.7	-1.7	-0.8	-0.9
Solids	245.76	256.67	247.89	212.39	188.51	173.83	0.7	-0.6	-3.8	-11.2	-7.8
Oil	14.21	92.93	153.38	116.26	117.08	120.47	36.7	8.7	-6.7	0.7	2.9
Natural gas	130.06	131.60	127.88	131.43	144.50	145.52	0.2	-0.5	0.7	9.9	0.7
Nuclear	21.90	47.11	135.03	158.54	161.94	166.68	13.6	19.2	4.1	2.1	2.9
Hydro and wind	13.66	15.51	14.31	12.61	13.79	13.91	2.1	-1.3	-3.1	9.4	0.9
Geothermal	1.95	1.89	1.73	1.98	1.95	1.98	-0.5	-1.5	3.5	-1.2	1.2
Other	1.32	1.66	1.67	3.02	3.29	3.06	3.9	0.1	16.0	8.6	-6.9
Net Imports	675.19	624.78	499.35	591.75	617.15	629.83	-1.3	-3.7	4.3	4.3	2.1
Solids	31.09	56.75	63.94	78.31	87.53	90.75	10.5	2.0	5.2	11.8	3.7
Oil	634.17	519.55	365.00	426.61	441.77	449.66	-3.3	-5.7	4.0	3.6	1.8
Crude oil	*648.80*	*503.78*	*343.49*	*404.23*	*413.15*	*436.45*	*-4.1*	*-6.2*	*4.2*	*2.2*	*5.6*
Oil products	*-14.63*	*15.77*	*21.52*	*22.38*	*28.63*	*13.21*	-	*5.3*	*1.0*	*27.9*	*-53.8*
Natural gas	9.16	47.10	69.15	85.22	87.21	88.40	31.4	6.6	5.4	2.3	1.4
Electricity	0.76	1.38	1.25	1.61	0.64	1.03	10.4	-1.7	6.6	-60.5	61.9
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	1054.64	1123.07	1139.15	1197.34	1212.57	1206.77	1.1	0.2	1.3	1.3	-0.5
Solids	288.16	302.24	305.17	294.76	274.08	256.11	0.8	0.2	-0.9	-7.0	-6.6
Oil	589.04	574.87	484.45	510.86	525.16	534.95	-0.4	-2.8	1.3	2.8	1.9
Natural gas	137.68	178.13	195.61	214.06	231.63	229.05	4.4	1.6	2.3	8.2	-1.1
Other *(1)*	39.75	67.83	153.92	177.65	181.70	186.66	9.3	14.6	3.6	2.3	2.7
Electricity Generation in TWh	1235.15	1501.95	1728.09	1905.18	1959.07	1976.26	3.3	2.4	2.5	2.8	0.9
Nuclear	76.65	177.98	533.45	632.67	650.96	678.63	15.1	20.1	4.4	2.9	4.3
Hydro and wind (including pumping)	165.14	188.18	179.89	160.78	176.50	179.69	2.2	-0.7	-2.8	9.8	1.8
Thermal	993.36	1135.80	1014.74	1111.72	1131.60	1117.94	2.3	-1.9	2.3	1.8	-1.2
Generation Capacity in GWe	299.97	364.42	431.92	458.82	456.44	459.61	3.3	2.9	1.5	-0.5	0.7
Nuclear	13.56	35.97	85.39	104.32	103.65	104.66	17.6	15.5	5.1	-0.6	1.0
Hydro and wind	55.72	65.10	77.06	81.35	81.92	82.81	2.6	2.8	1.4	0.7	1.1
Thermal	230.68	263.35	269.47	273.14	270.87	272.14	2.2	0.4	0.3	-0.8	0.5
Average Load Factor in %	47.0	47.0	45.7	47.4	49.0	49.1	0.0	-0.5	0.9	3.4	0.2
Fuel Inputs for Thermal Power Generation	239.89	273.82	242.33	261.88	266.78	260.29	2.2	-2.0	2.0	1.9	-2.4
Solids	117.48	164.05	171.93	179.20	180.07	174.55	5.7	0.8	1.0	0.5	-3.1
Oil	79.60	72.34	36.44	41.82	44.49	46.12	-1.6	-10.8	3.5	6.4	3.7
Gas	39.54	33.88	30.56	35.86	36.98	34.59	-2.5	-1.7	4.1	3.1	-6.5
Geothermal	1.95	1.89	1.73	1.98	1.95	1.98	-0.5	-1.5	3.5	-1.2	1.2
Other	1.32	1.66	1.67	3.02	3.29	3.06	3.9	0.1	16.0	8.6	-6.9
Average Thermal Efficiency in %	35.6	35.7	36.0	36.5	36.5	36.9	0.0	0.2	0.3	-0.1	1.3
Non-Energy Uses	78.07	73.30	73.53	78.29	82.76	83.68	-1.0	0.1	1.6	5.7	1.1
Total Final Energy Demand	712.99	747.34	745.42	772.64	784.43	782.73	0.8	0.0	0.9	1.5	-0.2
Solids	113.35	90.41	91.94	77.46	65.85	57.30	-3.7	0.3	-4.2	-15.0	-13.0
Oil	389.98	394.45	358.44	368.86	380.66	382.66	0.2	-1.6	0.7	3.2	0.5
Gas	115.23	146.74	162.40	175.54	187.43	191.43	4.1	1.7	2.0	6.8	2.1
Electricity	88.97	108.04	123.14	137.58	141.16	142.93	3.3	2.2	2.8	2.6	1.3
Heat	5.46	7.70	9.50	13.19	9.33	8.41	5.9	3.6	8.6	-29.3	-9.8
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	3052	3142	2938	3006	3061	3009	0.5	-1.1	0.6	1.8	-1.7
Indicators											
Population (Million)	326.75	333.97	338.87	343.56	345.05	346.65	0.4	0.2	0.3	0.4	0.5
GDP (bil. ECU1985)	2765	3191	3523	3978	4018	4064	2.4	1.7	3.1	1.0	1.1
Gross Inl Cons./GDP (toe/1985 MECU)	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6
Gross Inl Cons./Capita (kgoe/inhabitant)	3228	3363	3362	3485	3514	3481	0.7	0.0	0.9	0.8	-0.9
Electricity Generated/Capita (kWh/inhabitant)	3780	4497	5100	5545	5678	5701	2.9	2.1	2.1	2.4	0.4
CO2 Emissions/Capita (t of CO2/inhabitant)	9.34	9.41	8.67	8.75	8.87	8.68	0.1	-1.4	0.2	1.4	-2.2
Import Dependency %	62.0	54.3	42.6	47.9	49.6	50.8	-2.2	-3.9	3.0	3.5	2.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

BELGIUM: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	5.65	7.92	13.90	12.07	11.90	11.55	5.8	9.8	-3.5	-1.3	-3.0
Solids	5.52	4.69	3.84	1.08	0.86	0.45	-2.7	-3.3	-27.1	-20.9	-47.3
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0.05	0.03	0.02	0.01	0.01	0.00	-5.1	-6.2	-18.9	-14.9	-46.5
Nuclear	0.03	3.12	9.82	10.71	10.72	10.74	112.4	21.0	2.2	0.1	0.2
Hydro and wind	0.02	0.02	0.03	0.02	0.02	0.03	3.0	3.6	-5.5	-13.5	47.3
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.03	0.05	0.18	0.24	0.30	0.32	5.4	26.1	7.5	25.2	6.9
Net Imports	43.75	41.25	34.51	39.56	42.27	43.56	-1.0	-2.9	3.5	6.8	3.1
Solids	7.04	6.91	5.03	9.50	9.17	9.23	-0.3	-5.2	17.2	-3.5	0.7
Oil	28.42	25.68	22.85	22.17	24.60	25.18	-1.7	-1.9	-0.8	10.9	2.4
Crude oil	*30.32*	*33.38*	*26.20*	*26.82*	*30.20*	*29.77*	*1.6*	*-4.0*	*0.6*	*12.6*	*-1.4*
Oil products	*-1.90*	*-7.71*	*-3.35*	*-4.65*	*-5.61*	*-4.58*	*26.3*	*-12.9*	*8.5*	*20.7*	*-18.3*
Natural gas	8.32	8.89	6.65	8.22	8.66	9.14	1.1	-4.7	5.4	5.4	5.5
Electricity	-0.03	-0.23	-0.02	-0.32	-0.16	0.01	41.7	-34.3	104.5	-50.4	-
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	44.72	45.74	44.88	47.51	49.81	50.56	0.4	-0.3	1.4	4.9	1.5
Solids	12.41	10.97	8.85	10.25	9.97	9.41	-2.0	-3.5	3.8	-2.7	-5.6
Oil	23.88	22.89	19.40	18.44	20.23	21.00	-0.7	-2.7	-1.3	9.7	3.8
Natural gas	8.37	8.91	6.63	8.17	8.73	9.05	1.1	-4.8	5.4	6.9	3.6
Other *(1)*	0.06	2.96	10.01	10.65	10.88	11.10	92.1	22.5	1.6	2.1	2.0
Electricity Generation in TWh	42.73	53.63	58.67	70.83	71.93	72.25	3.9	1.5	4.8	1.6	0.4
Nuclear	0.14	12.55	39.39	42.71	42.85	43.45	111.7	21.0	2.0	0.3	1.4
Hydro and wind (including pumping)	0.68	0.83	1.40	0.90	0.99	1.16	3.4	9.1	-10.3	9.1	17.9
Thermal	41.91	40.26	17.88	27.21	28.09	27.63	-0.7	-12.7	11.1	3.2	-1.6
Generation Capacity in GWe	8.75	11.01	14.14	14.14	14.10	14.04	3.9	4.2	0.0	0.4	-1.1
Nuclear	0.40	1.67	5.51	5.50	5.49	5.49	26.8	22.1	0.0	-0.2	0.0
Hydro and wind	0.46	1.13	1.33	1.40	1.40	1.40	16.2	2.7	1.4	-0.1	0.0
Thermal	7.90	8.22	7.30	7.24	7.21	7.15	0.7	-2.0	-0.2	0.9	-2.1
Average Load Factor in %	55.7	55.6	47.4	57.2	57.8	58.7	0.0	-2.6	4.8	1.2	1.6
Fuel Inputs for Thermal Power Generation	9.99	9.42	4.35	6.42	6.64	6.54	-1.0	-12.1	10.2	3.5	-1.5
Solids	1.88	2.98	2.65	3.88	3.73	3.62	8.0	-1.9	10.0	-3.7	-2.9
Oil	4.48	4.07	0.67	0.32	0.46	0.43	-1.6	-26.0	-17.0	45.3	-6.9
Gas	3.61	2.32	0.85	1.98	2.14	2.16	-7.1	-15.3	23.4	8.0	1.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.03	0.05	0.18	0.24	0.30	0.32	5.4	26.1	7.5	25.2	6.9
Average Thermal Efficiency in %	36.1	36.8	35.3	36.5	36.4	36.3	0.3	-0.7	0.8	-0.2	-0.1
Non-Energy Uses	3.45	2.82	3.08	3.16	3.38	3.63	-3.3	1.5	0.7	6.8	7.5
Total Final Energy Demand	32.38	31.97	29.63	30.52	32.18	32.95	-0.2	-1.3	0.7	5.4	2.4
Solids	7.26	5.16	3.88	3.79	3.93	3.75	-5.5	-4.6	-0.6	3.7	-4.4
Oil	15.20	14.92	14.77	14.29	15.45	16.13	-0.3	-0.2	-0.8	8.1	4.4
Gas	6.48	7.76	6.51	7.25	7.38	7.45	3.0	-2.9	2.7	1.8	0.9
Electricity	3.12	3.74	4.25	4.99	5.20	5.38	3.1	2.2	4.1	4.4	3.4
Heat	0.33	0.39	0.22	0.21	0.22	0.23	3.1	-9.2	-0.9	5.7	2.2
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	144	133	104	111	117	117	-1.2	-4.0	1.6	4.7	0.0
Indicators											
Population (Million)	9.77	9.85	9.86	9.97	9.99	10.01	0.1	0.0	0.3	0.2	0.2
GDP (bil. ECU1985)	89	102	107	123	125	127	2.3	0.9	3.6	1.9	1.3
Gross Inl Cons./GDP (toe/1985 MECU)	503	451	419	386	397	398	-1.8	-1.2	-2.1	2.9	0.2
Gross Inl Cons./Capita (kgoe/inhabitant)	4578	4645	4551	4766	4988	5053	0.2	-0.3	1.2	4.7	1.3
Electricity Generated/Capita (kWh/inhabitant)	4374	5447	5949	7107	7203	7220	3.7	1.5	4.5	1.3	0.2
CO2 Emissions/Capita (t of CO2/inhabitant)	14.69	13.52	10.59	11.17	11.67	11.64	-1.4	-4.0	1.3	4.5	-0.2
Import Dependency %	92.3	85.7	72.3	76.7	78.3	79.6	-1.2	-2.8	1.5	2.1	1.7

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

DENMARK: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.09	0.30	5.35	8.87	10.61	11.54	22.1	61.5	13.5	19.6	8.8
Solids	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Oil	0.09	0.30	3.66	6.06	7.08	7.87	22.4	51.8	13.5	16.9	11.1
Natural gas	0	0	1.68	2.74	3.46	3.59	-	-	13.0	26.3	3.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.00	0.00	0.01	0.06	0.07	0.08	4.3	32.9	41.3	16.9	21.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
Net Imports	19.78	19.05	14.36	9.07	8.37	7.76	-0.6	-4.6	-10.8	-7.8	-7.3
Solids	2.27	5.96	7.43	6.23	7.78	7.38	17.4	3.7	-4.3	24.8	-5.2
Oil	17.52	13.20	7.46	3.16	2.00	1.43	-4.6	-9.1	-19.3	-36.6	-28.7
Crude oil	*9.37*	*6.30*	*4.08*	*2.03*	*0.97*	*1.04*	*-6.4*	*-7.0*	*-16.0*	*-52.0*	*7.1*
Oil products	*8.15*	*6.90*	*3.38*	*1.13*	*1.03*	*0.39*	*-2.8*	*-11.2*	*-24.0*	*-8.8*	*-62.6*
Natural gas	0.00	0.00	-0.54	-0.93	-1.25	-1.37	0.0	-	14.4	35.0	9.6
Electricity	-0.01	-0.11	0.01	0.61	-0.17	0.32	53.9	-	204.5	-	-
Other	0.00	0.00	0.00	0.00	0.00	0.00	-36.9	-	44.9	-	-69.2
Gross Inland Consumption	17.77	18.91	18.74	17.12	18.69	18.00	1.0	-0.1	-2.2	9.1	-3.7
Solids	1.92	5.78	7.21	6.11	8.26	6.85	20.1	3.8	-4.1	35.2	-17.1
Oil	15.85	13.23	10.48	8.55	8.50	8.62	-3.0	-3.8	-4.9	-0.7	1.5
Natural gas	0.00	0.00	1.03	1.79	2.03	2.13	-	-	14.8	13.9	4.7
Other *(1)*	0.00	0.00	0.02	0.68	0.00	0.40	-	-	-	-	-
Electricity Generation in TWh	18.74	27.11	30.73	25.75	36.32	30.84	6.3	2.1	-4.3	41.0	-15.1
Nuclear	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Hydro and wind (including pumping)	0.02	0.03	0.16	0.66	0.77	0.93	4.3	32.9	41.3	16.9	21.1
Thermal	18.72	27.08	30.57	25.10	35.56	29.91	6.3	2.0	-4.8	41.7	-15.9
Generation Capacity in GWe	5.97	7.07	8.62	9.14	9.58	10.03	2.9	3.4	1.5	4.8	4.7
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.01	0.01	0.01	0.01	0.01	0.01	0.0	2.0	2.7	0.0	0.0
Thermal	5.96	7.06	8.62	9.13	9.57	10.02	2.9	3.4	1.5	4.9	4.7
Average Load Factor in %	35.8	43.8	40.7	32.2	43.3	35.1	3.4	-1.2	-5.7	34.5	-18.9
Fuel Inputs for Thermal Power Generation	4.46	6.57	7.17	5.94	8.11	6.99	6.7	1.5	-4.6	36.4	-13.8
Solids	1.46	5.39	6.66	5.55	7.62	6.39	24.4	3.6	-4.5	37.4	-16.2
Oil	3.00	1.18	0.37	0.25	0.30	0.33	-14.4	-17.6	-9.7	21.2	12.1
Gas	0.00	0.00	0.13	0.14	0.18	0.26	-	-	0.4	35.9	42.2
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
Average Thermal Efficiency in %	36.1	35.4	36.7	36.3	37.7	36.8	-0.3	0.6	-0.2	3.9	-2.4
Non-Energy Uses	0.54	0.42	0.55	0.33	0.29	0.29	-4.2	4.6	-11.9	-13.1	2.1
Total Final Energy Demand	13.69	14.53	13.74	14.00	13.88	13.71	1.0	-0.9	0.5	-0.9	-1.2
Solids	0.48	0.47	0.71	0.46	0.44	0.35	-0.4	7.1	-10.1	-3.7	-21.8
Oil	11.27	11.34	8.72	7.59	7.61	7.44	0.1	-4.3	-3.4	0.3	-2.2
Gas	0.11	0.11	0.87	1.13	1.29	1.32	-0.4	42.0	6.7	13.9	2.4
Electricity	1.33	1.88	2.30	2.52	2.55	2.60	6.0	3.4	2.3	1.5	1.7
Heat	0.50	0.74	1.14	2.31	1.98	2.01	6.6	7.6	19.2	-13.9	1.2
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	54	63	61	52	61	56	2.9	-0.8	-3.7	17.0	-8.5
Indicators											
Population (Million)	5.05	5.12	5.12	5.14	5.15	5.16	0.3	0.0	0.1	0.3	0.2
GDP (bil. ECU1985)	59.9	67.3	79.5	82.7	83.8	85.6	2.0	2.8	1.0	1.2	2.2
Gross Inl Cons./GDP (toe/1985 MECU)	297	281	236	207	223	210	-0.9	-2.9	-3.2	7.8	-5.7
Gross Inl Cons./Capita (kgoe/inhabitant)	3522	3690	3659	3332	3626	3486	0.8	-0.1	-2.3	8.8	-3.9
Electricity Generated/Capita (kWh/inhabitant)	3715	5293	6001	5010	7048	5974	6.1	2.1	-4.4	40.7	-15.2
CO2 Emissions/Capita (t of CO2/inhabitant)	10.62	12.39	11.84	10.16	11.86	10.82	2.6	-0.8	-3.7	16.7	-8.7
Import Dependency %	108.2	98.6	74.8	50.2	42.8	41.1	-1.5	-4.5	-9.5	-14.7	-4.2

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

FRANCE: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	33.49	43.96	87.54	97.44	101.82	102.78	4.6	12.2	2.7	4.5	0.9
Solids	15.61	12.61	10.23	7.62	7.36	6.73	-3.5	-3.4	-7.1	-3.5	-8.5
Oil	2.03	2.55	3.57	3.43	3.54	3.44	3.9	5.8	-1.0	3.3	-2.8
Natural gas	6.37	6.33	3.54	2.42	2.86	2.78	-0.1	-9.2	-9.0	18.0	-2.6
Nuclear	4.46	16.33	64.59	79.13	82.93	83.74	24.2	25.8	5.2	4.8	1.0
Hydro and wind	4.94	6.02	5.42	4.64	4.94	5.88	3.4	-1.7	-3.8	6.6	19.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.09	0.13	0.18	0.20	0.19	0.19	6.5	5.4	2.6	-5.0	1.3
Net Imports	148.54	149.12	112.01	120.01	126.41	123.97	0.1	-4.7	1.7	5.3	-1.9
Solids	13.23	20.06	11.14	13.01	13.92	14.53	7.2	-9.3	3.9	7.0	4.4
Oil	126.33	112.65	81.54	86.54	91.32	87.45	-1.9	-5.2	1.5	5.5	-4.2
Crude oil	*130.75*	*113.92*	*71.90*	*75.99*	*78.05*	*76.53*	*-2.3*	*-7.4*	*1.4*	*2.7*	*-1.9*
Oil products	*-4.43*	*-1.27*	*9.64*	*10.55*	*13.27*	*10.92*	*-18.8*	-	*2.3*	*25.8*	*-17.7*
Natural gas	9.01	16.15	21.52	24.37	25.72	26.61	10.2	4.9	3.2	5.6	3.5
Electricity	-0.02	0.27	-2.19	-3.91	-4.55	-4.63	-	-	15.6	16.4	1.7
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	168.76	184.61	197.37	212.50	223.02	221.78	1.5	1.1	1.9	5.0	-0.6
Solids	29.01	31.15	20.38	19.96	20.84	19.19	1.2	-6.8	-0.5	4.4	-7.9
Oil	116.14	109.15	84.65	87.60	90.44	89.33	-1.0	-4.1	0.9	3.2	-1.2
Natural gas	14.12	21.57	24.33	24.88	28.23	28.07	7.3	2.0	0.6	13.4	-0.6
Other *(1)*	9.49	22.75	68.01	80.06	83.51	85.19	15.7	20.0	4.2	4.3	2.0
Electricity Generation in TWh	188.16	257.93	362.72	420.08	454.65	462.76	5.4	5.8	3.7	8.2	1.8
Nuclear	14.70	61.24	254.11	314.02	331.28	338.38	26.9	26.8	5.4	5.5	2.1
Hydro and wind (including pumping)	57.68	70.67	65.27	57.91	62.05	73.09	3.4	-1.3	-2.9	7.1	17.8
Thermal	115.78	126.02	43.34	48.14	61.32	51.29	1.4	-16.3	2.7	27.4	-16.4
Generation Capacity in GWe	44.87	62.87	92.56	103.06	104.20	105.04	5.8	6.7	2.7	1.1	0.8
Nuclear	2.87	14.39	44.70	55.75	56.78	57.68	30.8	20.8	5.7	1.8	1.6
Hydro and wind	16.58	19.44	23.10	24.64	24.83	24.88	2.7	2.9	1.6	0.8	0.2
Thermal	25.42	29.03	24.76	22.67	22.59	22.48	2.2	-2.6	-2.2	-0.4	-0.5
Average Load Factor in %	47.9	46.8	44.7	46.5	49.8	50.3	-0.4	-0.8	1.0	7.1	1.0
Fuel Inputs for Thermal Power Generation	25.22	27.90	10.10	10.72	13.09	10.80	1.7	-15.6	1.5	22.1	-17.5
Solids	6.69	14.23	7.36	7.33	8.87	7.62	13.4	-10.4	-0.1	20.9	-14.0
Oil	14.47	10.63	1.03	1.76	2.73	1.74	-5.0	-32.2	14.2	55.5	-36.2
Gas	3.96	2.91	1.53	1.42	1.30	1.24	-5.0	-10.2	-1.7	-8.9	-4.7
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.09	0.13	0.18	0.20	0.19	0.19	6.5	5.4	2.6	-5.0	1.3
Average Thermal Efficiency in %	39.5	38.8	36.9	38.6	40.3	40.9	-0.3	-0.9	1.2	4.3	1.4
Non-Energy Uses	11.71	12.10	12.16	13.08	16.46	16.30	0.6	0.1	1.8	25.9	-1.0
Total Final Energy Demand	122.83	128.09	122.59	126.27	130.86	132.15	0.7	-0.7	0.7	3.6	1.0
Solids	15.51	11.45	10.02	9.05	8.79	8.42	-4.9	-2.2	-2.5	-2.9	-4.1
Oil	80.40	78.73	66.83	67.57	67.52	68.89	-0.3	-2.7	0.3	-0.1	2.0
Gas	13.21	19.67	22.99	23.69	26.95	26.47	6.9	2.6	0.8	13.7	-1.8
Electricity	13.70	18.25	22.75	25.96	27.61	28.38	4.9	3.7	3.4	6.3	2.8
Heat	0.01	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	481	477	365	368	383	376	-0.1	-4.4	0.2	4.0	-1.9
Indicators											
Population (Million)	52.46	53.88	55.39	56.74	57.05	57.37	0.4	0.5	0.6	0.6	0.6
GDP (bil. ECU1985)	551	642	708	801	810	824	2.6	1.7	3.1	1.1	1.7
Gross Inl Cons./GDP (toe/1985 MECU)	306	288	279	265	275	269	-1.0	-0.5	-1.2	3.8	-2.2
Gross Inl Cons./Capita (kgoe/inhabitant)	3217	3426	3563	3745	3909	3866	1.1	0.7	1.3	4.4	-1.1
Electricity Generated/Capita (kWh/inhabitant)	3587	4787	6548	7404	7969	8067	4.9	5.4	3.1	7.6	1.2
CO2 Emissions/Capita (t of CO2/inhabitant)	9.16	8.85	6.58	6.49	6.71	6.55	-0.6	-4.8	-0.4	3.4	-2.4
Import Dependency %	85.5	79.1	56.1	55.8	56.0	55.3	-1.3	-5.6	-0.1	0.4	-1.4

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

GERMANY: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	178.38	186.81	204.92	187.81	161.83	156.58	0.8	1.6	-2.2	-13.8	-3.2
Solids	147.76	148.33	150.96	130.01	106.06	97.59	0.1	0.3	-3.7	-18.4	-8.0
Oil	6.71	5.03	5.49	4.23	3.67	3.55	-4.7	1.5	-6.3	-13.3	-3.4
Natural gas	17.82	16.69	14.39	13.42	13.53	13.72	-1.1	-2.4	-1.7	0.9	1.4
Nuclear	3.73	14.16	31.72	37.55	36.13	39.00	24.9	14.4	4.3	-3.8	7.9
hydro	1.52	1.64	1.53	1.53	1.26	1.49	1.3	-1.1	0.0	-17.5	18.4
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.85	0.97	0.83	1.08	1.18	1.22	2.3	-2.5	6.8	9.4	3.3
Net Imports	158.47	189.98	166.37	165.40	180.48	186.24	3.1	-2.2	-0.1	9.1	3.2
Solids	-9.06	-0.94	4.00	3.15	7.82	9.98	-31.4	-	-5.8	148.2	27.6
Oil	147.35	154.90	126.39	120.43	129.29	132.36	0.8	-3.3	-1.2	7.4	2.4
Crude oil	*121.14*	*128.38*	*86.50*	*88.89*	*89.25*	*99.42*	*1.0*	*-6.4*	*0.7*	*0.4*	*11.4*
Oil products	*26.21*	*26.52*	*39.89*	*31.55*	*40.04*	*32.94*	*0.2*	*7.0*	*-5.7*	*26.9*	*-17.7*
Natural gas	19.58	35.41	35.45	41.75	43.42	44.36	10.4	0.0	4.2	4.0	2.2
Electricity	0.60	0.62	0.53	0.07	-0.05	-0.46	0.3	-2.4	-39.8	-	825.2
Other	0.00	0.00	0.00	0.00	0.00	0.00	-98.3	-8.4	-35.0	-	-
Gross Inland Consumption	337.24	368.35	360.27	356.08	341.10	333.90	1.5	-0.4	-0.3	-4.2	-2.1
Solids	145.30	146.72	151.32	137.12	115.11	104.72	0.2	0.5	-2.4	-16.1	-9.0
Oil	147.87	152.37	124.65	124.05	129.74	131.13	0.5	-3.3	-0.1	4.6	1.1
Natural gas	37.22	51.72	49.74	54.79	57.72	56.80	5.6	-0.6	2.4	5.4	-1.6
Other *(1)*	6.84	17.55	34.56	40.12	38.52	41.26	17.0	12.0	3.8	-4.0	7.1
Electricity Generation in TWh	391.92	467.51	523.48	549.79	539.29	537.04	3.0	1.9	1.2	-1.9	-0.4
Nuclear	14.31	55.58	130.47	152.44	147.40	158.78	25.4	15.3	4.0	-3.3	7.7
Hydro (with pumping)	19.20	20.30	20.31	19.72	18.47	21.15	0.9	0.0	-0.7	-6.4	14.5
Thermal	358.41	391.63	372.71	377.63	373.42	357.11	1.5	-0.8	0.3	-1.1	-4.4
Generation Capacity in GWe	81.21	102.39	117.38	121.11	118.12	115.43	3.9	2.3	0.8	-2.5	-2.3
Nuclear	3.84	10.44	20.70	24.24	22.53	22.61	18.1	12.1	4.0	-7.0	0.3
Hydro	5.53	7.95	8.55	8.70	8.55	8.63	6.2	1.2	0.4	-1.7	0.9
Thermal	71.84	84.01	88.12	88.18	87.03	84.19	2.6	0.8	0.0	-1.3	-3.3
Average Load Factor in %	55.1	52.1	50.9	51.8	52.1	53.1	-0.9	-0.4	0.4	0.6	1.9
Fuel Inputs for Thermal Power Generation	86.69	99.06	94.86	94.36	95.19	89.60	2.2	-0.7	-0.1	0.9	-5.9
Solids	61.37	73.39	79.54	77.35	76.35	74.69	3.0	1.4	-0.7	-1.3	-2.2
Oil	8.22	6.92	3.88	3.27	4.42	4.07	-2.8	-9.2	-4.2	35.3	-8.0
Gas	16.26	17.79	10.61	12.66	13.24	9.62	1.5	-8.2	4.5	4.6	-27.3
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Other	0.85	0.97	0.83	1.08	1.18	1.22	2.3	-2.5	6.8	9.4	3.2
Average Thermal Efficiency in %	35.6	34.0	33.8	34.4	33.7	34.3	-0.7	-0.1	0.5	-2.0	1.6
Non-Energy Uses	23.85	23.21	20.86	21.35	21.31	21.12	-0.5	-1.8	0.6	-0.2	-0.9
Total Final Energy Demand	222.63	235.92	237.82	230.08	220.69	218.51	1.0	0.1	-0.8	-4.1	-1.0
Solids	51.34	47.08	47.41	38.69	26.67	20.59	-1.4	0.1	-5.0	-31.1	-22.8
Oil	108.12	109.19	102.00	97.02	103.47	103.86	0.2	-1.1	-1.2	6.7	0.4
Gas	30.66	39.66	43.00	45.31	45.03	49.53	4.4	1.4	1.3	-0.6	10.0
Electricity	27.99	33.78	37.67	39.13	39.15	38.77	3.2	1.8	1.0	0.1	-1.0
Heat	4.52	6.22	7.74	9.93	6.36	5.76	5.5	3.7	6.4	-36.0	-9.5
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	1023	1063	1024	968	964	928	0.6	-0.6	-1.4	-0.4	-3.7
Indicators											
Population (Million)	78.51	78.12	77.69	78.95	79.48	80.14	-0.1	-0.1	0.4	0.7	0.8
GDP (bil. ECU1985)	737	854	921	1028	1049	1060	2.5	1.3	2.8	2.1	1.1
Gross Inl. Cons../GDP (toe/1985 MECU)	457	431	391	347	326	312	-1.0	-1.6	-3.0	-5.8	-4.2
Gross Inl. Cons./Capita (toe/inhabitant)	4295	4715	4638	4510	4292	4167	1.6	-0.3	-0.7	-4.8	-2.9
Electricity Generated/Capita (kWh/inhabitant)	4992	5984	6738	6964	6785	6701	3.1	2.0	0.8	-2.6	-1.2
CO2 Emissions/Capita (t of CO2/inhabitant)	13.03	13.61	13.18	12.26	12.13	11.58	0.7	-0.5	-1.8	-1.1	-4.5
Import Dependency %	46.6	51.2	45.5	45.5	52.6	55.5	1.6	-1.9	0.0	15.7	5.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

GREECE: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	2.11	3.15	6.89	8.20	8.10	8.00	6.9	14.0	4.4	-1.2	-1.2
Solids	1.89	2.83	5.19	7.08	6.86	7.00	7.0	10.6	8.1	-3.1	2.0
Oil	0.00	0.00	1.32	0.83	0.84	0.69	-	-	-10.9	0.4	-17.5
Natural gas	0.00	0.00	0.10	0.14	0.14	0.13	-	-	8.9	-0.9	-7.6
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.20	0.29	0.28	0.15	0.27	0.19	6.5	-0.6	-14.3	75.2	-28.7
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.02	0.03	0.00	0.00	0.00	0.00	6.2	-	-	-	-
Net Imports	11.15	13.55	13.38	15.38	15.62	17.75	3.3	-0.2	3.5	1.6	13.6
Solids	0.56	0.40	1.13	0.99	0.93	1.40	-5.5	19.2	-3.4	-5.6	50.3
Oil	10.59	13.11	12.13	14.33	14.63	16.30	3.6	-1.3	4.2	2.1	11.3
Crude oil	*11.40*	*14.46*	*15.45*	*14.72*	*13.42*	*15.83*	*4.0*	*1.1*	*-1.2*	*-8.8*	*17.9*
Oil products	*-0.81*	*-1.35*	*-3.32*	*-0.39*	*1.21*	*0.47*	*8.9*	*16.1*	*-41.6*	-	*-61.5*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.00	0.05	0.11	0.06	0.06	0.05	61.4	13.1	-13.8	-9.4	-6.1
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	10.97	15.10	17.18	21.30	21.46	22.07	5.5	2.2	5.5	0.7	2.9
Solids	2.34	3.16	6.32	8.09	7.72	8.18	5.1	12.3	6.4	-4.6	6.0
Oil	8.41	11.57	10.37	12.86	13.28	13.52	5.5	-1.8	5.5	3.3	1.8
Natural gas	0.00	0.00	0.10	0.14	0.14	0.13	-	-	8.9	-0.9	-7.6
Other *(1)*	0.22	0.37	0.39	0.21	0.32	0.24	9.0	0.9	-14.2	50.9	-24.8
Electricity Generation in TWh	15.01	22.65	28.28	34.99	35.81	37.40	7.1	3.8	5.5	2.3	4.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind (including pumping)	2.34	3.40	3.40	2.00	3.17	2.39	6.5	0.0	-12.4	58.8	-24.5
Thermal	12.67	19.24	24.88	33.00	32.64	35.01	7.2	4.4	7.3	-1.1	7.3
Generation Capacity in GWe	3.97	5.32	7.52	8.51	8.91	8.97	5.0	5.9	3.1	4.7	0.63
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	1.29	1.42	2.14	2.41	2.51	2.53	1.6	7.1	3.0	4.3	0.80
Thermal	2.68	3.91	5.39	6.10	6.40	6.44	6.5	5.5	3.2	4.9	0.56
Average Load Factor in %	43.2	48.6	42.9	47.0	45.9	47.6	2.0	-2.0	2.3	-2.3	3.81
Fuel Inputs for Thermal Power Generation	3.20	4.65	6.55	8.72	8.59	8.96	6.4	5.9	7.4	-1.5	4.32
Solids	1.54	2.52	5.14	6.89	6.58	6.98	8.6	12.6	7.6	-4.4	6.1
Oil	1.64	2.10	1.40	1.80	1.98	1.97	4.2	-6.6	6.5	9.8	-0.5
Gas	0.00	0.00	0.01	0.03	0.03	0.01	-	-	20.1	2.6	-54.2
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.02	0.03	0.00	0.00	0.00	0.00	6.2	-	-	-	-
Average Thermal Efficiency in %	34.1	35.6	32.7	32.5	32.7	33.6	0.7	-1.4	-0.1	0.4	2.8
Non-Energy Uses	0.31	0.55	0.56	0.55	0.58	0.60	9.8	0.5	-0.7	6.6	3.3
Total Final Energy Demand	7.68	10.56	11.33	13.56	13.77	13.89	5.5	1.2	4.6	1.6	0.8
Solids	0.69	0.52	1.19	1.05	1.09	1.03	-4.6	14.8	-3.0	3.3	-5.3
Oil	5.89	8.33	8.06	10.05	10.15	10.21	6.0	-0.5	5.7	1.1	0.5
Gas	0.00	0.00	0.01	0.01	0.01	0.01	0.0	21.5	11.8	-0.5	1.3
Electricity	1.11	1.71	2.07	2.45	2.52	2.64	7.6	3.2	4.2	3.0	4.7
Heat	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	34.9	47.4	58.2	73.1	72.8	74.1	5.2	3.5	5.9	-0.4	1.8
Indicators											
Population (Million)	8.96	9.64	9.96	10.09	10.20	10.28	1.2	0.5	0.3	1.1	0.8
GDP (bil. ECU1985)	31.1	40.9	44.4	47.4	48.3	49.2	4.6	1.4	1.7	1.8	1.9
Gross Inl Cons./GDP (toe/1985 MECU)	353	369	387	449	444	449	0.8	0.8	3.8	-1.0	1.0
Gross Inl Cons./Capita (kgoe/inhabitant)	1224	1566	1724	2111	2104	2147	4.2	1.6	5.2	-0.3	2.1
Electricity Generated/Capita (kWh/inhabitant)	1675	2349	2838	3469	3510	3638	5.8	3.2	5.1	1.2	3.6
CO2 Emissions/Capita (t of CO2/inhabitant)	3.90	4.92	5.84	7.24	7.14	7.21	4.0	2.9	5.5	-1.4	1.0
Import Dependency %	96.1	85.1	70.8	64.5	65.7	71.7	-2.0	-3.0	-2.3	1.8	9.2

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

IRELAND: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.80	1.65	2.69	3.28	3.40	3.23	12.8	8.5	5.1	3.5	-5.1
Solids	0.73	0.84	1.26	1.35	1.42	1.26	2.3	6.9	1.9	4.9	-11.4
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0.00	0.74	1.36	1.87	1.92	1.90	-	10.8	8.3	2.3	-0.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.07	0.07	0.08	0.06	0.06	0.07	1.2	1.6	-6.6	7.0	10.2
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
Net Imports	5.93	6.53	6.74	7.09	6.91	6.70	1.6	0.5	1.3	-2.5	-3.1
Solids	0.59	0.79	1.74	2.08	2.05	1.94	5.1	13.9	4.6	-1.4	-5.5
Oil	5.35	5.74	5.00	5.01	4.86	4.76	1.2	-2.3	0.0	-2.9	-2.1
Crude oil	*2.65*	*2.04*	*1.50*	*2.02*	*1.74*	*2.01*	*-4.2*	*-5.0*	*7.6*	*-13.8*	*15.7*
Oil products	*2.70*	*3.70*	*3.50*	*2.99*	*3.12*	*2.74*	*5.4*	*-0.9*	*-3.9*	*4.5*	*-12.1*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	6.67	8.11	9.00	10.04	10.28	9.97	3.3	1.8	2.8	2.4	-3.1
Solids	1.40	1.68	2.78	3.51	3.48	3.23	3.1	8.8	6.0	-0.8	-7.4
Oil	5.20	5.62	4.79	4.60	4.82	4.77	1.3	-2.6	-1.0	4.8	-1.0
Natural gas	0.00	0.74	1.36	1.87	1.92	1.90	-	10.8	8.3	2.3	-0.9
Other *(1)*	0.07	0.07	0.08	0.06	0.06	0.07	1.4	1.6	-6.6	7.0	10.2
Electricity Generation in TWh	7.84	10.88	12.65	14.51	15.14	16.01	5.6	2.5	3.5	4.4	5.7
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind (including pumping)	0.96	1.15	1.26	0.98	0.96	1.05	3.1	1.5	-6.1	-1.9	9.4
Thermal	6.88	9.73	11.39	13.53	14.18	14.95	5.9	2.7	4.4	4.8	5.5
Generation Capacity in GWe	2.11	3.08	3.72	3.81	3.81	3.93	6.6	3.2	0.6	0.1	3.2
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.53	0.51	0.51	0.51	0.52	0.52	-0.6	-0.1	0.1	0.6	0.0
Thermal	1.57	2.57	3.21	3.29	3.30	3.42	8.5	3.8	0.6	0.0	3.7
Average Load Factor in %	42.5	40.3	38.8	43.5	45.4	46.5	-0.9	-0.6	2.9	4.2	2.4
Fuel Inputs for Thermal Power Generation	1.81	2.43	2.70	3.12	3.24	3.39	5.0	1.8	3.7	3.8	4.6
Solids	0.61	0.63	0.87	1.94	1.90	2.07	0.7	5.5	22.4	-2.4	9.2
Oil	1.21	1.41	1.20	0.34	0.55	0.57	2.6	-2.7	-27.2	63.2	2.9
Gas	0.00	0.38	0.63	0.84	0.79	0.75	-	8.7	7.3	-5.6	-5.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
Average Thermal Efficiency in %	32.7	34.5	36.3	37.3	37.6	37.9	0.9	0.8	0.7	1.0	0.8
Non-Energy Uses	0.21	0.48	0.55	0.61	0.64	0.60	14.7	2.2	2.8	5.0	-6.2
Total Final Energy Demand	4.91	5.73	6.48	6.96	7.24	7.01	2.6	2.1	1.8	4.0	-3.2
Solids	0.78	1.05	1.91	1.53	1.55	1.14	5.2	10.5	-5.4	1.3	-26.4
Oil	3.50	3.87	3.36	3.84	3.98	4.05	1.7	-2.3	3.4	3.6	1.8
Gas	0.10	0.07	0.33	0.57	0.64	0.69	-5.2	29.3	14.8	11.9	7.0
Electricity	0.54	0.74	0.88	1.02	1.07	1.14	5.3	2.9	3.9	5.0	6.0
Heat	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	21.2	24.8	28.0	30.8	31.8	31.1	2.6	2.0	2.4	3.3	-2.3
Indicators											
Population (Million)	3.12	3.40	3.54	3.50	3.52	3.56	1.4	0.7	-0.3	0.6	0.9
GDP (bil. ECU1985)	16.6	21.9	24.8	31.5	32.3	32.1	4.7	2.0	6.2	2.5	-0.5
Gross Inl Cons./GDP (toe/1985 MECU)	401	370	364	319	319	311	-1.4	-0.3	-3.2	-0.1	-2.6
Gross Inl Cons./Capita (kgoe/inhabitant)	2134	2384	2543	2867	2918	2804	1.9	1.1	3.0	1.8	-3.9
Electricity Generated/Capita (kWh/inhabitant)	2510	3199	3572	4143	4297	4503	4.1	1.9	3.8	3.7	4.8
CO2 Emissions/Capita (t of CO2/inhabitant)	6.80	7.30	7.91	8.78	9.02	8.74	1.2	1.3	2.7	2.7	-3.2
Import Dependency %	88.0	79.8	74.6	70.5	67.0	67.1	-1.6	-1.1	-1.4	-4.9	0.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

ITALY: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	20.68	19.17	23.60	24.05	24.56	25.52	-1.3	3.5	0.5	2.1	3.9
Solids	0.28	0.31	0.27	0.34	0.25	0.27	1.5	-2.3	5.7	-24.7	6.4
Oil	1.24	1.99	2.57	4.70	4.35	4.51	8.3	4.3	16.3	-7.6	3.7
Natural gas	12.59	10.26	12.93	14.03	14.11	14.73	-3.4	3.9	2.1	0.6	4.4
Nuclear	1.05	0.67	2.44	0	0	0	-7.2	24.0	-100.0	-	-
Hydro and wind	3.25	3.89	3.53	2.72	3.63	3.63	3.0	-1.6	-6.3	33.6	-0.1
Geothermal	1.95	1.89	1.73	1.98	1.95	1.98	-0.5	-1.5	3.5	-1.2	1.2
Other	0.33	0.16	0.14	0.28	0.26	0.40	-11.5	-1.9	19.2	-6.8	51.0
Net Imports	113.99	119.41	113.91	131.86	128.98	134.14	0.8	-0.8	3.7	-2.2	4.0
Solids	8.58	11.36	13.94	13.79	13.71	12.07	4.8	3.5	-0.3	-0.6	-12.0
Oil	101.80	95.76	81.65	89.78	84.74	90.75	-1.0	-2.6	2.4	-5.6	7.1
Crude oil	*119.70*	*92.93*	*81.07*	*84.18*	*82.61*	*89.49*	*-4.1*	*-2.3*	*0.9*	*-1.9*	*8.3*
Oil products	*-17.90*	*2.83*	*0.58*	*5.60*	*2.12*	*1.27*	-	*-23.3*	*76.6*	*-62.1*	*-40.3*
Natural gas	3.41	11.77	16.41	25.31	27.52	28.28	22.9	5.7	11.4	8.7	2.8
Electricity	0.20	0.52	1.90	2.98	3.02	3.04	17.7	24.0	11.9	1.2	0.6
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	126.79	134.24	134.42	151.33	153.29	155.24	1.0	0.0	3.0	1.3	1.3
Solids	9.21	11.52	14.23	14.64	13.96	12.20	3.8	3.6	0.7	-4.7	-12.6
Oil	94.85	92.87	81.58	89.71	89.00	92.89	-0.4	-2.1	2.4	-0.8	4.4
Natural gas	15.96	22.73	28.88	39.02	41.46	41.11	6.1	4.1	7.8	6.3	-0.8
Other *(1)*	6.77	7.13	9.74	7.96	8.86	9.04	0.9	5.3	-4.9	11.4	1.9
Electricity Generation in TWh	148.87	185.71	192.30	216.85	222.00	226.20	3.8	0.6	3.1	2.4	1.9
Nuclear	3.41	2.21	8.76	0	0	0	-7.0	25.8	-100.0	-	-
Hydro and wind (including pumping)	39.34	47.51	44.52	35.07	45.60	45.78	3.2	-1.1	-5.8	30.0	0.4
Thermal	106.13	136.00	139.02	181.78	176.40	180.42	4.2	0.4	6.9	-3.0	2.3
Generation Capacity in GWe	38.35	46.82	56.21	56.55	57.87	61.63	3.4	3.1	0.2	2.3	6.5
Nuclear	0.55	1.42	1.27	0	0	0	17.1	-1.9	-100.0	-	-
Hydro and wind	14.87	15.83	17.86	18.77	19.08	19.35	1.0	2.0	1.2	1.6	1.4
Thermal	22.92	29.57	37.07	37.78	38.79	42.27	4.3	3.8	0.5	2.7	9.0
Average Load Factor in %	44.3	45.3	39.1	43.8	43.8	41.9	0.4	-2.4	2.9	0.0	-4.3
Fuel Inputs for Thermal Power Generation	24.30	30.51	30.73	39.76	38.49	38.98	3.9	0.1	6.7	-3.2	1.3
Solids	0.92	3.28	6.11	7.07	6.32	4.72	23.5	11.0	3.7	-10.7	-25.3
Oil	19.53	22.47	16.53	21.53	21.72	23.94	2.4	-5.0	6.8	0.9	10.2
Gas	1.57	2.72	6.22	8.90	8.24	7.95	9.6	14.8	9.4	-7.4	-3.5
Geothermal	1.95	1.89	1.73	1.98	1.95	1.98	-0.5	-1.5	3.5	-1.2	1.2
Other	0.33	0.16	0.14	0.28	0.26	0.40	-11.5	-1.9	19.2	-6.8	51.0
Average Thermal Efficiency in %	37.6	38.3	38.9	39.3	39.4	39.8	0.3	0.2	0.3	0.2	1.0
Non-Energy Uses	12.14	8.86	8.95	9.84	9.74	13.06	-5.1	0.2	2.4	-1.0	34.1
Total Final Energy Demand	88.58	96.51	95.00	107.06	109.96	107.80	1.4	-0.3	3.0	2.7	-2.0
Solids	4.78	4.07	4.06	4.28	4.29	4.56	-2.6	-0.1	1.3	0.3	6.4
Oil	58.48	59.24	53.01	54.69	54.49	52.27	0.2	-1.8	0.8	-0.4	-4.1
Gas	14.30	19.46	22.54	29.68	32.36	31.81	5.3	2.5	7.1	9.0	-1.7
Electricity	11.03	13.74	15.40	18.41	18.82	19.17	3.7	1.9	4.6	2.3	1.8
Heat	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	337	367	355	402	401	393	1.4	-0.5	3.1	-0.3	-1.9
Indicators											
Population (Million)	55.11	56.43	57.25	57.66	57.80	57.91	0.4	0.2	0.2	0.2	0.2
GDP (bil. ECU1985)	425	522	576	651	660	669	3.5	1.7	3.1	1.4	1.3
Gross Inl Cons./GDP (toe/1985 MECU)	298	257	233	233	232	232	-2.4	-1.6	-0.1	-0.1	0.0
Gross Inl Cons./Capita (kgoe/inhabitant)	2301	2379	2348	2624	2652	2680	0.6	-0.2	2.8	1.1	1.1
Electricity Generated/Capita (kWh/inhabitant)	2701	3291	3359	3761	3841	3906	3.3	0.3	2.9	2.1	1.7
CO2 Emissions/Capita (t of CO2/inhabitant)	6.11	6.50	6.21	6.98	6.94	6.79	1.0	-0.8	3.0	-0.5	-2.1
Import Dependency %	85.9	86.3	82.5	85.6	82.8	85.1	0.1	-0.7	0.9	-3.3	2.8

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

LUXEMBOURG: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.01	0.02	0.02	0.03	0.03	0.03	14.0	2.0	7.1	-6.8	5.1
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.01	0.01	0.01	0.01	0.00	0.01	2.6	-1.6	-5.7	-20.5	29.5
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.01	0.02	0.03	0.03	0.03	29.0	3.9	11.3	-3.8	0.7
Net Imports	4.70	3.61	3.05	3.51	3.70	3.77	-4.3	-2.8	3.6	5.4	1.8
Solids	2.65	1.84	1.29	1.13	1.06	1.00	-5.9	-5.8	-3.4	-5.8	-5.3
Oil	1.52	1.10	1.16	1.62	1.85	1.95	-5.3	0.9	8.7	14.1	5.7
Crude oil	*0*	*0*	*0*	*0*	*0*	*0*	-	-	-	-	-
Oil products	*1.52*	*1.10*	*1.16*	*1.62*	*1.85*	*1.95*	*-5.3*	*0.9*	*8.7*	*14.1*	*5.7*
Natural gas	0.29	0.42	0.30	0.43	0.45	0.47	6.4	-5.5	9.3	4.0	4.2
Electricity	0.23	0.24	0.30	0.34	0.34	0.34	1.0	3.5	2.9	2.2	-0.4
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	4.77	3.63	3.07	3.53	3.75	3.77	-4.5	-2.8	3.6	6.2	0.5
Solids	2.72	1.84	1.29	1.13	1.06	1.00	-6.3	-5.7	-3.4	-5.8	-5.3
Oil	1.52	1.10	1.15	1.61	1.87	1.93	-5.3	0.8	8.7	16.2	3.0
Natural gas	0.29	0.42	0.30	0.43	0.45	0.47	6.4	-5.5	9.3	4.0	4.2
Other *(1)*	0.24	0.27	0.32	0.37	0.37	0.37	1.7	3.3	3.2	1.4	0.0
Electricity Generation in TWh	2.07	1.11	1.02	1.38	1.38	1.20	-9.8	-1.5	7.8	0.4	-13.4
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind (including pumping)	0.92	0.29	0.53	0.82	0.77	0.61	-17.6	10.7	11.6	-6.5	-20.7
Thermal	1.15	0.83	0.49	0.56	0.62	0.59	-5.3	-8.3	3.3	10.4	-4.4
Generation Capacity in GWe	1.16	1.31	1.24	1.24	1.24	1.24	2.1	-0.9	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.93	1.13	1.13	1.13	1.13	1.13	3.3	0.0	0.0	0.0	0.0
Thermal	0.23	0.18	0.11	0.11	0.11	0.11	-3.9	-8.2	0.0	0.0	0.0
Average Load Factor in %	20.4	9.7	9.4	12.7	12.8	11.0	-11.6	-0.6	7.8	0.4	-13.4
Fuel Inputs for Thermal Power Generation	0.38	0.26	0.16	0.20	0.20	0.20	-6.3	-8.0	6.2	-0.8	2.6
Solids	0.01	0.01	0.00	0.00	0	0	-5.0	-22.4	-100.0	-	-
Oil	0.10	0.02	0.02	0.01	0.00	0.02	-22.7	1.5	-24.0	-100.0	-
Gas	0.26	0.21	0.11	0.16	0.17	0.16	-3.4	-10.0	9.8	4.5	-7.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.01	0.02	0.03	0.03	0.03	29.0	3.9	11.3	-3.8	0.7
Average Thermal Efficiency in %	26.2	27.8	27.1	24.3	27.0	25.2	1.0	-0.4	-2.7	11.3	-6.8
Non-Energy Uses	0.03	0.04	0.02	0.02	0.02	0.02	2.8	-12.9	4.1	-20.0	0.0
Total Final Energy Demand	4.40	3.37	2.91	3.30	3.55	3.53	-4.4	-2.4	3.2	7.6	-0.6
Solids	1.76	1.34	0.91	0.75	0.70	0.68	-4.5	-6.2	-4.7	-6.6	-3.5
Oil	1.38	1.03	1.10	1.57	1.85	1.89	-4.8	1.2	9.3	17.7	1.8
Gas	0.96	0.69	0.57	0.62	0.64	0.60	-5.3	-3.3	2.4	2.4	-5.0
Electricity	0.29	0.31	0.33	0.35	0.36	0.37	0.8	1.1	2.0	2.3	0.7
Heat	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	21.7	14.6	11.7	12.5	13.2	12.7	-6.4	-3.7	1.7	5.6	-3.9
Indicators											
Population (Million)	0.36	0.37	0.37	0.38	0.39	0.39	0.4	0.2	0.8	1.1	-0.2
GDP (bil. ECU1985)	3.9	4.0	4.8	5.7	5.9	6.0	0.7	2.9	4.6	3.1	1.2
Gross Inl Cons./GDP (toe/1985 MECU)	1234	898	640	616	635	630	-5.2	-5.5	-1.0	3.0	-0.7
Gross Inl Cons./Capita (kgoe/inhabitant)	13356	9936	8288	9248	9714	9787	-4.8	-3.0	2.8	5.0	0.8
Electricity Generated/Capita (kWh/inhabitant)	5794	3054	2756	3609	3583	3109	-10.1	-1.7	7.0	-0.7	-13.2
CO2 Emissions/Capita (t of CO2/inhabitant)	0.80	40.11	31.63	32.71	34.17	32.92	-6.7	-3.9	0.8	4.5	-3.7
Import Dependency %	98.5	99.5	99.5	99.4	98.6	99.8	0.2	0.0	0.0	-0.8	1.3

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

NETHERLANDS: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	66.67	69.64	62.18	59.74	66.58	66.55	0.7	-1.9	-1.0	11.4	0.0
Solids	0.52	0	0	0	0	0	-100.0	-	-	-	-
Oil	1.56	1.58	5.04	4.03	3.76	3.43	0.2	21.4	-5.4	-6.8	-8.9
Natural gas	63.75	66.67	55.97	54.61	61.74	62.01	0.7	-2.9	-0.6	13.1	0.4
Nuclear	0.84	1.07	1.06	0.88	0.84	0.87	4.2	-0.2	-4.5	-4.9	3.6
Hydro and wind	0.00	0.00	0.00	0.01	0.01	0.02	0.0	-	155.7	-10.1	75.7
Geothermal	0	0	0	0	0	0	0.0	-	-	-	-
Other	0.00	0.32	0.11	0.20	0.22	0.22	0.0	-16.6	17.1	10.7	0.0
Net Imports	4.73	5.30	13.33	17.51	14.53	13.92	1.9	16.6	7.1	-17.0	-4.2
Solids	2.43	4.06	6.90	9.49	8.32	7.82	8.9	9.2	8.3	-12.3	-6.0
Oil	35.59	37.52	29.70	31.03	32.70	33.98	0.9	-3.8	1.1	5.4	3.9
Crude oil	*63.86*	*50.22*	*46.11*	*48.11*	*51.93*	*55.66*	*-3.9*	*-1.4*	*1.1*	*7.9*	*7.2*
Oil products	*-28.27*	*-12.70*	*-16.41*	*-17.08*	*-19.22*	*-21.68*	*-12.5*	*4.4*	*1.0*	*12.5*	*12.8*
Natural gas	-33.16	-36.25	-23.45	-23.80	-27.29	-28.63	1.5	-7.0	0.4	14.6	4.9
Electricity	-0.13	-0.03	0.19	0.79	0.79	0.75	-23.1	-	43.4	-0.6	-5.2
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	60.11	65.02	64.05	66.39	69.42	68.80	1.3	-0.3	0.9	4.6	-0.9
Solids	2.95	4.10	7.05	9.12	8.07	7.92	5.6	9.5	6.6	-11.5	-1.9
Oil	25.85	29.14	23.13	24.58	25.04	25.64	2.0	-3.8	1.5	1.9	2.4
Natural gas	30.60	30.42	32.52	30.81	34.45	33.38	-0.1	1.1	-1.3	11.8	-3.1
Other *(1)*	0.71	1.37	1.35	1.89	1.86	1.86	11.5	-0.2	8.7	-1.5	-0.1
Electricity Generation in TWh	55.33	64.79	67.15	71.85	74.24	77.19	2.7	0.6	1.7	3.3	4.0
Nuclear	3.27	4.20	4.22	3.50	3.33	3.80	4.3	0.1	-4.5	-4.9	14.1
Hydro and wind (including pumping)	0.00	0.00	0.00	0.17	0.15	0.27	-	-	155.7	-10.1	75.7
Thermal	52.06	60.59	62.93	68.18	70.76	73.12	2.6	0.6	2.0	3.8	3.3
Generation Capacity in GWe	12.99	17.29	17.38	17.44	17.55	17.52	4.9	0.1	0.1	0.6	-0.2
Nuclear	0.50	0.50	0.51	0.51	0.51	0.51	-0.1	0.3	0.0	0.0	0.0
Hydro and wind	0.00	0.00	0.00	0.04	0.04	0.04	0.0	0.0	0.0	2.8	0.0
Thermal	12.49	16.80	16.87	16.90	17.00	16.98	5.1	0.1	0.0	0.6	-0.2
Average Load Factor in %	48.6	42.8	44.1	47.0	48.3	50.3	-2.1	0.5	1.6	2.7	4.1
Fuel Inputs for Thermal Power Generation	11.85	12.86	13.07	14.25	14.71	15.08	1.4	0.3	2.2	3.2	2.5
Solids	0.23	1.36	3.49	5.70	5.06	5.00	34.9	17.0	13.1	-11.3	-1.1
Oil	0.95	5.24	0.59	0.70	0.75	0.70	32.9	-30.5	4.3	6.8	-7.1
Gas	10.67	5.94	8.88	7.65	8.68	9.16	-9.3	6.9	-3.7	13.5	5.5
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.32	0.11	0.20	0.22	0.22	0.0	-16.6	17.1	10.7	0.0
Average Thermal Efficiency in %	37.8	40.5	41.4	41.1	41.4	41.7	1.2	0.4	-0.2	0.5	0.8
Non-Energy Uses	9.36	8.37	8.34	9.15	9.69	9.41	-1.8	-0.1	2.3	6.0	-2.9
Total Final Energy Demand	38.63	43.64	43.49	42.75	44.89	44.53	2.1	-0.1	-0.4	5.0	-0.8
Solids	1.48	1.11	1.75	1.73	1.39	1.40	-4.7	7.9	-0.3	-19.7	0.5
Oil	13.55	14.27	13.77	13.19	13.14	13.90	0.9	-0.6	-1.1	-0.4	5.8
Gas	19.44	23.11	22.27	21.24	23.56	22.16	2.9	-0.6	-1.2	10.9	-6.0
Electricity	4.05	4.93	5.36	6.32	6.50	6.69	3.3	1.4	4.2	2.8	3.0
Heat	0.10	0.22	0.35	0.27	0.30	0.38	13.6	7.8	-6.1	9.7	29.2
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	139	153	151	157	162	162	1.5	-0.2	1.1	2.6	0.2
Indicators											
Population (Million)	13.55	14.15	14.57	14.95	15.07	15.19	0.7	0.5	0.6	0.8	0.8
GDP (bil. ECU1985)	143	162	174	196	200	196	2.2	1.2	3.0	2.2	-1.8
Gross Inl Cons./GDP (toe/1985 MECU)	421	400	368	339	347	350	-0.8	-1.4	-2.0	2.3	0.9
Gross Inl Cons./Capita (kgoe/inhabitant)	4437	4595	4395	4440	4607	4529	0.6	-0.7	0.3	3.7	-1.7
Electricity Generated/Capita (kWh/inhabitant)	4085	4579	4608	4806	4926	5081	1.9	0.1	1.1	2.5	3.1
CO2 Emissions/Capita (t of CO2/inhabitant)	10.28	10.78	10.33	10.53	10.72	10.66	0.8	-0.7	0.5	1.8	-0.6
Import Dependency %	6.8	7.1	18.1	22.7	18.0	17.4	0.8	16.8	5.8	-20.4	-3.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

PORTUGAL: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.81	0.76	0.91	1.02	1.04	0.65	-1.0	3.0	2.8	1.7	-37.0
Solids	0.14	0.07	0.09	0.12	0.11	0.10	-10.1	3.1	7.3	-3.9	-8.6
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	0.67	0.69	0.73	0.79	0.78	0.40	0.4	1.1	1.8	-1.2	-48.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0.09	0.11	0.15	0.15	-	-	6.4	28.0	2.7
Net Imports	7.00	9.88	10.76	15.16	15.06	16.57	5.9	1.4	8.9	-0.6	10.0
Solids	0.21	0.35	1.07	2.79	2.73	2.84	9.0	20.6	27.1	-2.2	4.1
Oil	6.79	9.38	9.53	12.37	12.33	13.62	5.5	0.3	6.7	-0.3	10.5
Crude oil	*5.70*	*8.23*	*8.21*	*11.36*	*10.18*	*11.78*	*6.3*	*0.0*	*8.4*	*-10.4*	*15.8*
Oil products	*1.09*	*1.15*	*1.32*	*1.01*	*2.15*	*1.84*	*0.8*	*2.3*	*-6.5*	*113.2*	*-14.4*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.01	0.16	0.16	0.00	0.01	0.12	77.6	0.5	-62.5	148.0	-
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	6.90	9.55	11.13	15.10	15.43	16.69	5.6	2.6	7.9	2.2	8.2
Solids	0.43	0.44	1.12	2.58	2.94	2.96	0.4	16.8	23.2	13.9	0.8
Oil	5.79	8.26	9.03	11.61	11.56	13.07	6.1	1.5	6.5	-0.4	13.0
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Other *(1)*	0.68	0.85	0.99	0.91	0.93	0.67	3.8	2.6	-2.1	3.0	-28.6
Electricity Generation in TWh	10.72	15.26	20.38	28.49	29.87	30.08	6.1	4.9	8.7	4.8	0.7
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind (including pumping)	7.87	8.07	8.57	9.30	9.18	5.08	0.4	1.0	2.1	-1.4	-44.7
Thermal	2.86	7.19	11.81	19.19	20.69	25.00	16.6	8.6	12.9	7.8	20.9
Generation Capacity in GWe	2.91	4.44	6.46	7.40	7.41	7.92	7.3	6.4	3.4	0.2	6.8
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro and wind	2.12	2.52	3.16	3.34	3.33	3.71	2.9	3.9	1.4	-0.3	11.3
Thermal	0.79	1.92	3.30	4.05	4.08	4.21	16.0	9.4	5.3	0.7	3.1
Average Load Factor in %	42.0	39.2	36.0	44.0	46.0	43.4	-1.1	-1.4	5.1	4.6	-5.7
Fuel Inputs for Thermal Power Generation	0.64	1.51	2.61	4.26	4.53	5.43	15.4	9.5	13.0	6.4	19.7
Solids	0.15	0.09	0.75	2.03	2.15	2.21	-8.5	43.0	28.4	6.2	2.6
Oil	0.49	1.40	1.76	2.10	2.21	3.03	19.0	3.9	4.5	5.1	37.3
Gas	0.00	0.03	0.02	0.02	0.03	0.04	-	-8.3	4.5	37.1	35.7
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0
Other	0.00	0.00	0.09	0.11	0.15	0.15	-	-	6.4	28.0	2.7
Average Thermal Efficiency in %	38.3	40.8	38.9	38.7	39.2	39.6	1.1	-0.8	-0.1	1.3	1.0
Non-Energy Uses	0.29	0.52	1.45	2.10	1.78	1.91	10.4	18.8	9.6	-15.2	7.5
Total Final Energy Demand	5.38	7.12	7.44	9.45	9.95	10.38	4.8	0.7	6.2	5.2	4.3
Solids	0.19	0.22	0.39	0.62	0.66	0.61	3.1	9.9	12.0	6.5	-6.6
Oil	4.34	5.58	5.32	6.69	7.05	7.43	4.3	-0.8	5.9	5.4	5.5
Gas	0.09	0.09	0.09	0.10	0.08	0.10	-0.7	1.3	2.5	-20.0	21.3
Electricity	0.77	1.23	1.60	2.02	2.14	2.21	8.2	4.4	6.1	5.6	3.2
Heat	0	0	0.04	0.03	0.03	0.03	-	-	-10.5	12.0	10.7
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	18	25	29	40	42	46	5.5	2.2	8.7	4.7	10.2
Indicators											
Population (Million)	8.48	9.29	9.69	9.81	9.82	9.83	1.5	0.7	0.3	0.1	0.1
GDP (bil. ECU1985)	20.9	25.9	28.2	33.8	34.5	35.2	3.7	1.4	4.7	2.1	2.0
Gross Inl Cons./GDP (toe/1985 MECU)	331	369	395	446	447	474	1.8	1.2	3.1	0.1	6.1
Gross Inl Cons./Capita (kgoe/inhabitant)	813	1028	1149	1539	1572	1699	4.0	1.9	7.6	2.2	8.0
Electricity Generated/Capita (kWh/inhabitant)	1264	1643	2104	2905	3043	3061	4.5	4.2	8.4	4.7	0.6
CO2 Emissions/Capita (t of CO2/inhabitant)	2.15	2.70	2.95	4.07	4.26	4.69	3.9	1.5	8.4	4.6	10.0
Import Dependency %	89.9	99.1	92.5	96.5	93.9	95.8	1.6	-1.1	1.1	-2.8	2.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

SPAIN: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	14.76	17.93	27.67	29.78	29.76	28.94	3.3	7.5	1.9	-0.1	-2.8
Solids	8.35	12.26	13.12	11.68	10.94	11.46	6.6	1.1	-2.9	-6.3	4.7
Oil	1.92	1.79	2.11	0.79	1.06	1.07	-1.2	2.8	-21.7	34.3	0.7
Natural gas	0.00	0.00	0.33	1.27	1.19	1.09	0.0	192.7	39.8	-6.5	-8.5
Nuclear	1.87	1.34	9.72	13.70	14.03	13.59	-5.4	39.1	9.0	2.4	-3.1
Hydro and wind	2.63	2.54	2.28	2.19	2.35	1.63	-0.6	-1.8	-1.0	7.3	-30.7
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0.12	0.15	0.19	0.10	-	-	6.6	21.3	-46.8
Net Imports	45.20	54.37	45.72	59.85	63.58	67.02	3.1	-2.8	7.0	6.2	5.4
Solids	2.26	4.21	5.36	7.04	8.51	9.46	10.9	4.1	7.1	20.9	11.2
Oil	41.88	48.58	38.27	49.15	50.73	52.66	2.5	-3.9	6.5	3.2	3.8
Crude oil	*43.06*	*46.87*	*46.82*	*53.24*	*52.80*	*54.86*	*1.4*	*0.0*	*3.3*	*-0.8*	*3.9*
Oil products	*-1.18*	*1.71*	*-8.55*	*-4.09*	*-2.07*	*-2.20*	-	-	*-16.8*	*-49.3*	*6.3*
Natural gas	1.16	1.71	2.20	3.69	4.40	4.84	6.7	4.3	13.8	19.2	10.1
Electricity	-0.10	-0.12	-0.11	-0.04	-0.06	0.06	3.3	-1.6	-24.0	61.6	-
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	57.59	69.82	71.29	85.45	90.47	91.81	3.3	0.3	4.6	5.9	1.5
Solids	10.60	15.02	18.40	18.94	19.91	20.81	6.0	3.4	0.7	5.1	4.5
Oil	41.32	49.29	38.33	45.53	48.45	49.77	3.0	-4.1	4.4	6.4	2.7
Natural gas	1.09	1.74	2.55	4.97	5.60	5.85	8.2	6.6	18.1	12.7	4.6
Other *(1)*	4.40	3.76	12.00	16.00	16.51	15.37	-2.6	21.3	7.5	3.1	-6.9
Electricity Generation in TWh	80.86	110.46	129.18	151.71	155.68	158.48	5.3	2.6	4.1	2.6	1.8
Nuclear	7.22	5.19	37.45	54.26	55.57	55.77	-5.4	39.0	9.7	2.4	0.4
Hydro and wind (including pumping)	31.35	30.80	27.46	26.18	28.29	20.93	-0.3	-1.9	-1.2	8.1	-26.0
Thermal	42.29	74.48	64.26	71.28	71.82	81.77	9.9	-2.4	2.6	0.8	13.9
Generation Capacity in GWe	23.58	29.16	40.16	43.41	43.62	44.00	3.6	5.5	2.0	0.5	0.9
Nuclear	1.12	1.09	5.55	6.97	6.99	7.02	-0.4	31.1	5.9	0.2	0.5
Hydro and wind	11.10	12.73	15.08	16.23	16.34	16.40	2.3	2.9	1.9	0.7	0.3
Thermal	11.36	15.34	19.54	20.21	20.30	20.58	5.1	4.1	0.8	0.4	1.4
Average Load Factor in %	39.1	43.2	36.7	39.9	40.7	41.1	1.7	-2.7	2.1	2.1	0.9
Fuel Inputs for Thermal Power Generation	11.89	19.62	14.71	16.69	17.10	19.73	8.7	-4.7	3.2	2.5	15.4
Solids	4.85	10.04	12.41	13.88	13.82	15.63	12.9	3.6	2.8	-0.4	13.1
Oil	6.91	8.75	1.56	2.17	2.61	3.49	4.0	-25.0	8.6	20.2	33.9
Gas	0.14	0.82	0.62	0.49	0.49	0.51	35.0	-4.7	-5.8	0.2	5.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.00	0.12	0.15	0.19	0.10	-	-	6.6	21.3	-46.8
Average Thermal Efficiency in %	30.6	32.7	37.6	36.7	36.1	35.6	1.1	2.4	-0.6	-1.7	-1.3
Non-Energy Uses	3.92	4.49	4.51	5.85	5.96	5.79	2.3	0.1	6.7	2.0	-2.9
Total Final Energy Demand	36.58	43.31	44.29	52.84	56.80	57.27	2.9	0.4	4.5	7.5	0.8
Solids	3.83	2.52	3.85	3.52	3.88	3.52	-6.7	7.3	-2.2	10.2	-9.3
Oil	26.05	31.48	28.71	33.60	36.65	36.94	3.2	-1.5	4.0	9.1	0.8
Gas	1.13	1.59	2.71	4.90	5.21	5.56	5.8	9.2	16.0	6.3	6.8
Electricity	5.56	7.72	9.03	10.82	11.06	11.24	5.6	2.7	4.6	2.3	1.7
Heat	0	0	0	0	0	0	-	-	-	-	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	157	198	183	210	224	234	4.0	-1.4	3.5	6.6	4.5
Indicators											
Population (Million)	35.15	37.39	38.67	38.96	39.03	39.09	1.0	0.6	0.2	0.2	0.2
GDP (bil. ECU1985)	184	202	225	272	278	285	1.6	1.8	4.8	2.3	2.6
Gross Inl Cons./GDP (toe/1985 MECU)	313	345	316	314	325	321	1.7	-1.4	-0.2	3.5	-1.2
Gross Inl Cons./Capita (kgoe/inhabitant)	1639	1867	1844	2193	2318	2346	2.2	-0.2	4.4	5.7	1.2
Electricity Generated/Capita (kWh/inhabitant)	2300	2955	3341	3894	3989	4055	4.3	2.1	3.9	2.4	1.6
CO2 Emissions/Capita (t of CO2/inhabitant)	4.47	5.31	4.73	5.39	5.73	5.98	2.9	-1.9	3.3	6.4	4.3
Import Dependency %	77.2	76.1	61.2	67.1	67.4	70.1	-0.2	-3.6	2.3	0.6	4.0

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

UNITED KINGDOM: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	105.41	196.07	246.20	203.92	211.42	210.10	10.9	3.9	-4.6	3.7	-0.6
Solids	64.96	74.73	62.94	53.11	54.65	48.98	2.4	-2.8	-4.2	2.9	-10.4
Oil	0.68	79.70	129.61	92.18	92.77	95.91	121.1	8.4	-8.2	0.6	3.4
Natural gas	29.49	30.89	37.56	40.92	45.55	45.57	0.8	3.3	2.2	11.3	0.0
Nuclear	9.93	10.41	15.69	16.57	17.29	18.74	0.8	7.1	1.4	4.3	8.4
Hydro and wind	0.35	0.34	0.40	0.44	0.39	0.48	-0.7	2.7	2.5	-9.7	20.9
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.00	0.00	0.71	0.76	0.43	-	-	-	8.0	-44.4
Net Imports	111.95	12.72	-34.79	7.35	11.24	8.45	-30.4	-	-	53.0	-24.8
Solids	0.35	1.77	4.92	9.12	11.54	13.10	31.2	18.6	16.7	26.4	13.6
Oil	111.05	1.96	-50.68	-8.98	-7.28	-10.78	-49.0	-	-35.1	-19.0	48.1
Crude oil	*110.86*	*7.04*	*-44.37*	*-3.13*	*1.98*	*0.06*	*-36.8*	-	*-48.5*	*-163.4*	*-97.1*
Oil products	*0.19*	*-5.09*	*-6.31*	*-5.86*	*-9.26*	*-10.84*	-	*3.7*	*-1.9*	*58.1*	*17.1*
Natural gas	0.55	9.00	10.61	6.18	5.57	4.69	59.3	2.8	-12.6	-9.8	-15.8
Electricity	0.00	0.00	0.37	1.03	1.41	1.44	-36.6	234.8	29.4	37.4	1.7
Other	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	212.55	199.90	207.75	210.98	215.74	214.18	-1.0	0.6	0.4	2.3	-0.7
Solids	69.87	69.88	66.23	63.31	62.75	59.64	0.0	-0.9	-1.1	-0.9	-5.0
Oil	102.37	79.38	76.90	81.73	82.23	83.28	-4.2	-0.5	1.5	0.6	1.3
Natural gas	30.04	39.89	48.17	47.20	50.90	50.17	4.8	3.2	-0.5	7.8	-1.4
Other *(1)*	10.28	10.75	16.45	18.75	19.86	21.08	0.7	7.3	3.3	6.0	6.1
Electricity Generation in TWh	272.91	284.89	301.53	318.92	322.75	326.82	0.7	1.0	1.4	1.2	1.3
Nuclear	33.60	37.02	59.07	65.74	70.53	78.45	1.6	8.1	2.7	7.3	11.2
Hydro and wind (including pumping)	4.79	5.12	7.00	7.07	6.11	7.25	1.1	5.4	0.2	-13.5	18.6
Thermal	234.51	242.75	235.46	246.12	246.10	241.12	0.6	-0.5	1.1	0.0	-2.0
Generation Capacity in GWe	74.11	73.64	66.53	73.01	70.02	69.87	-0.1	-1.7	2.3	-4.1	-0.2
Nuclear	4.28	6.46	7.14	11.35	11.35	11.35	7.1	1.7	12.3	0.0	0.0
Hydro and wind	2.30	2.45	4.19	4.17	4.18	4.21	1.0	9.3	-0.1	0.2	0.8
Thermal	67.53	64.73	55.20	57.49	54.49	54.31	-0.7	-2.6	1.0	-5.2	-0.3
Average Load Factor in %	42.0	44.2	51.7	49.9	52.6	53.4	0.8	2.7	-0.9	5.5	1.5
Fuel Inputs for Thermal Power Generation	59.46	59.03	55.32	57.44	56.89	54.60	-0.1	-1.1	0.9	-1.0	-4.0
Solids	37.79	50.13	46.95	47.57	47.67	45.61	4.8	-1.1	0.3	0.2	-4.3
Oil	18.59	8.14	7.43	7.59	6.77	5.85	-12.9	-1.5	0.5	-10.8	-13.6
Gas	3.08	0.76	0.94	1.57	1.68	2.72	-20.8	3.5	13.7	7.5	61.3
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Other	0.00	0.00	0.00	0.71	0.76	0.43	-	-	-	8.0	-44.4
Average Thermal Efficiency in %	33.9	35.4	36.6	36.9	37.2	38.0	0.7	0.6	0.2	1.0	2.1
Non-Energy Uses	12.27	11.45	12.50	12.26	12.90	10.95	-1.1	1.5	-0.5	5.3	-15.1
Total Final Energy Demand	135.30	126.59	130.71	135.85	140.65	141.00	-1.1	0.5	1.0	3.5	0.2
Solids	25.27	15.43	15.86	12.01	12.48	11.24	-7.9	0.5	-6.7	3.9	-9.9
Oil	61.81	56.49	52.80	58.78	59.31	59.68	-1.5	-1.1	2.7	0.9	0.6
Gas	28.75	34.52	40.52	41.02	44.27	45.72	3.1	2.7	0.3	7.9	3.3
Electricity	19.47	20.02	21.52	23.60	24.17	24.35	0.5	1.2	2.3	2.4	0.8
Heat	0.00	0.13	0.01	0.45	0.43	0.00	0.0	-35.0	158.3	-2.7	-
Other	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2	622	576	570	580	591	580	-1.3	-0.2	0.5	1.8	-1.8
Indicators											
Population (Million)	56.24	56.33	56.76	57.41	57.56	57.74	0.0	0.1	0.3	0.3	0.3
GDP (bil. ECU1985)	503	547	630	707	691	694	1.4	2.4	2.9	-2.2	0.5
Gross Inl Cons./GDP (toe/1985 MECU)	422	365	330	299	312	309	-2.4	-1.7	-2.5	4.6	-1.2
Gross Inl Cons./Capita (kgoe/inhabitant)	3780	3549	3660	3675	3748	3709	-1.0	0.5	0.1	2.0	-1.0
Electricity Generated/Capita (kWh/inhabitant)	4853	5057	5312	5555	5607	5660	0.7	0.8	1.1	0.9	0.9
CO2 Emissions/Capita (t of CO2/inhabitant)	11.06	10.22	10.04	10.11	10.26	10.04	-1.3	-0.3	0.2	1.5	-2.1
Import Dependency %	51.6	6.3	-16.6	3.4	5.2	3.9	-29.6	-	-	49.7	-24.3

(1) Includes nuclear, hydro and wind, net imports of electricity, and other energy sources.

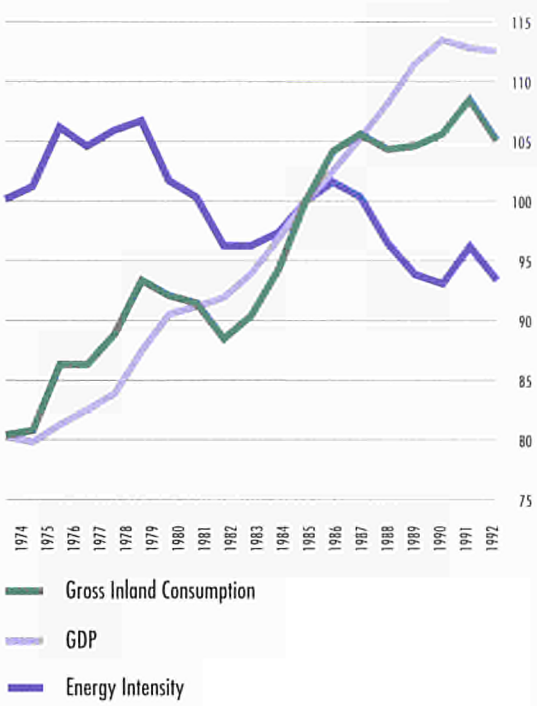
WESTERN EUROPE

EFTA

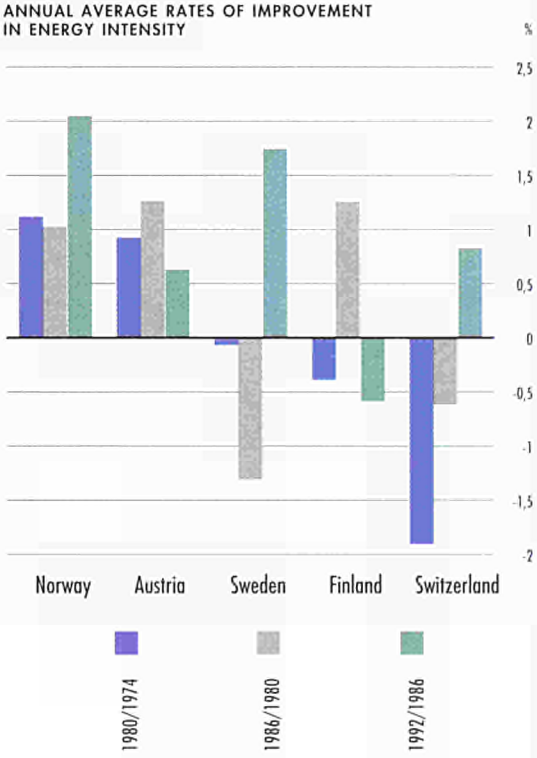
This region comprises the rest of Western Europe. These countries are: Austria, Finland, Iceland, Norway, Sweden and Switzerland. Due to lack of information, Liechtenstein is not covered in the analysis. Austria, Finland and Sweden are to become Members of the European Union by 1 January 1995. Together, these three countries equate to 9% of the total European Union's primary energy consumption. As a whole, EFTA became a net exporter in the late 1980s and it has steadily increased its export volumes since then. Export volumes more than doubled from 1990 to 1992. These developments are due to a 120% increase in oil exports, while gas export volumes stagnated around 13 Mtoe. This evolution is due to Norway, which is an important supplier of oil and natural gas to the whole of Western Europe. All other EFTA countries are net importers of energy. In general, the fall in gross energy consumption in 1992 (-3.2%) was mainly due to developments in Norway (-2.1%) and Sweden (-5.3%). However, the reasons for the fall differ between countries. While Sweden lost 1.7% in GDP, Norway's economy grew by 3.2%. Finland also suffered from a large drop in GDP (-4.0%) but its primary energy demand increased 1.1% in 1992. Switzerland had no GDP growth, but saw its primary energy needs augmented by 0.5%. Austria, Iceland and Sweden improved their energy intensities, given that either primary energy needs diminished more than GDP (Iceland and Sweden) or energy consumption only grew 1.1% compared to a GDP growth of 1.5% (Austria).

In terms of **energy intensity**, almost all EFTA countries show improvements over the period, except for Switzerland. This country has by far the lowest level with 182 toe/1985 MECU in 1992, or 34% lower than the EFTA average. However, the Swiss intensity had its lowest level in 1974. Since then it increased until 1986, dropped to 1990 and has been increasing since then. In Norway there has been a steady decrease in intensity representing the highest level of improvement over the period (1.4% per year). Austria also shows a steadily increasing improvement in its energy intensity, except for 1991 when it had an increase of 3.0%.

MAIN INDICATORS



ANNUAL AVERAGE RATES OF IMPROVEMENT IN ENERGY INTENSITY



EFTA countries can be split into two groups for the ratio of **energy consumption to population.** Austria and Switzerland with ratios between 3.3 and 3.7 toe/inhabitant respectively, and the other countries where this ratio varies from 4.9 toe/inhabitant (Iceland) and 5.6 toe/inhabitant (Finland). However, the differences among countries are to a very large extent function of their geographic situation (climate).

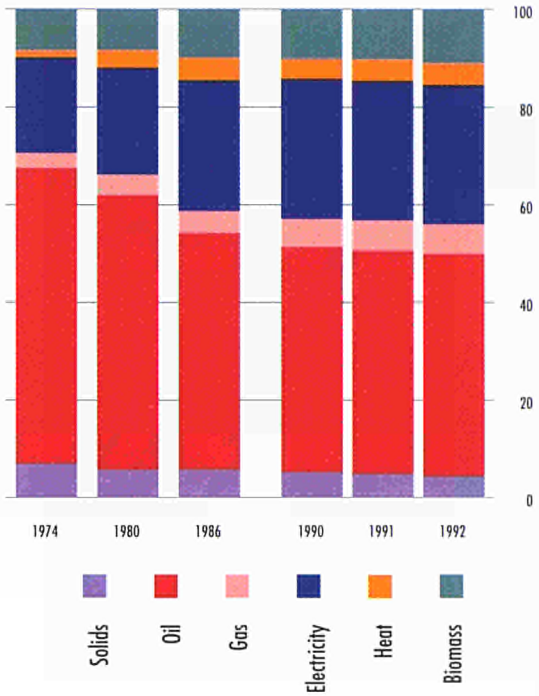
Except for Austria, the overall energy **dependency** of EFTA countries shows a downward trend in the period. Norway is a net exporter and, in 1992, it exported almost six times more than its gross inland consumption.

EFTA: MAIN INDICATORS

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Energy Intensity (toe/1985 MECU)												
EFTA	291	296	293	269	278	274	0.3	-0.1	-2.2	3.3	-1.3	-0.3
Austria	310	293	272	255	263	261	-0.9	-1.3	-1.6	3.0	-0.4	-0.9
Finland	398	407	377	340	371	391	0.4	-1.3	-2.6	9.1	5.3	-0.1
Iceland	1955	1926	289	336	304	302	-0.2	-27.1	3.9	-9.8	-0.5	-9.9
Norway	312	292	274	257	255	242	-1.1	-1.0	-1.6	-0.9	-5.1	-1.4
Sweden	339	340	368	328	344	331	0.1	1.3	-2.8	4.8	-3.7	-0.1
Switzerland	165	185	192	178	181	182	1.9	0.6	-1.8	1.6	0.5	0.6
Gross Inland Consumption per Capita (toe/inhabitant)												
EFTA	3.67	4.16	4.64	4.59	4.68	4.57	2.1	1.8	-0.3	1.9	-2.3	1.2
Austria	2.80	3.11	3.10	3.26	3.44	3.46	1.7	0.0	1.2	5.5	0.6	1.2
Finland	4.45	5.23	5.55	5.70	5.74	5.78	2.7	1.0	0.7	0.7	0.7	1.5
Iceland	3.88	4.13	4.85	5.72	5.04	4.93	1.1	2.7	4.2	-11.9	-2.1	1.3
Norway	3.83	4.61	5.22	5.07	5.10	4.96	3.1	2.1	-0.7	0.5	-2.8	1.4
Sweden	4.57	4.93	5.93	5.58	5.73	5.38	1.3	3.1	-1.5	2.6	-6.0	0.9
Switzerland	2.85	3.32	3.69	3.70	3.71	3.67	2.5	1.8	0.1	0.3	-1.1	1.4
Energy Dependency (%)												
EFTA	72.5	31.8	11.4	-17.2	-25.3	-35.1	-12.9	-15.7	-	47.6	38.5	-
Austria	64.5	70.5	69.9	69.9	67.9	69.3	1.5	-0.1	0.0	-2.9	2.1	0.4
Finland	84.1	72.8	63.0	62.8	58.4	55.9	-2.4	-2.4	-0.1	-7.0	-4.3	-2.2
Iceland	76.0	64.2	54.9	56.5	53.2	60.7	-2.8	-2.6	0.7	-5.8	14.1	-1.2
Norway	44.0	-189.1	-248.4	-438.6	-491.6	-565.7	-	4.7	15.3	12.1	15.1	-
Sweden	79.1	67.0	44.8	38.2	35.6	37.4	-2.7	-6.5	-3.9	-6.8	5.2	-4.1
Switzerland	79.0	68.2	62.0	61.0	61.2	59.9	-2.4	-1.6	-0.4	0.2	-2.0	-1.5
Share of Total Gross Inland Consumption (%)												
EFTA												
Austria	18.6	18.0	15.9	17.0	17.6	18.0	-0.5	-2.0	1.6	3.4	2.7	-0.2
Finland	18.3	19.2	18.5	19.1	18.8	19.3	0.8	-0.6	0.7	-1.2	2.7	0.3
Iceland	0.7	0.7	0.8	1.0	0.9	0.9	-0.5	1.5	4.9	-10.8	0.6	0.8
Norway	13.4	14.5	14.8	14.4	14.2	14.1	1.3	0.3	-0.7	-1.7	-0.6	0.3
Sweden	32.8	31.5	33.7	32.0	32.2	30.9	-0.7	1.1	-1.3	0.6	-3.9	-0.3
Switzerland	16.1	16.1	16.3	16.6	16.4	16.8	-0.1	0.2	0.5	-1.2	2.0	0.2
CO2 Emissions (Million tonnes of CO2)												
EFTA	257	273	259	262	267	261	1.0	-0.9	0.3	1.7	-2.1	0.1
Austria	53	56	56	61	64	60	1.0	-0.1	2.0	5.8	-6.2	0.7
Finland	48	56	50	57	57	54	2.6	-2.0	3.2	0.4	-5.3	0.6
Iceland	2	2	2	2	2	2	-1.6	0.4	4.9	-11.1	3.7	0.2
Norway	25	32	35	33	31	31	4.2	1.7	-1.5	-4.7	-1.0	1.2
Sweden	88	84	70	63	63	65	-0.8	-2.9	-2.6	0.3	2.2	-1.7
Switzerland	41	43	46	47	49	49	0.9	1.0	0.3	4.9	0.5	1.0

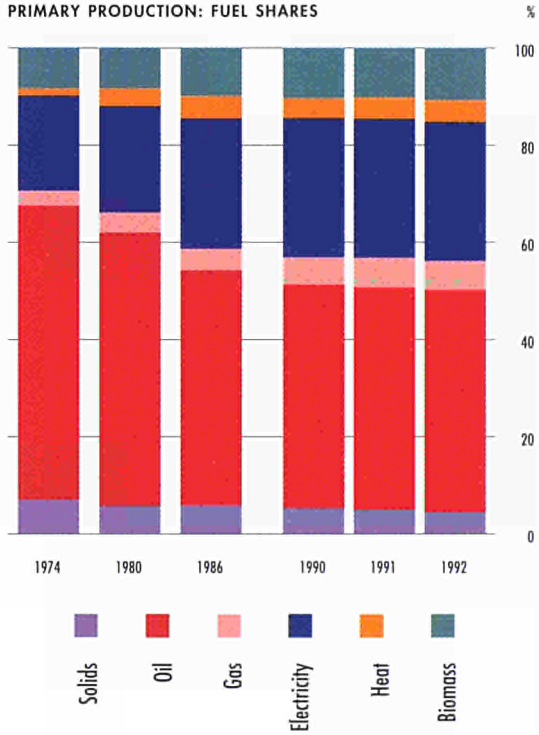
Final energy demand in the EFTA countries as a whole increased steadily since 1974 by 0.9% per year on average. This evolution is also characterised by a certain switching away from solids and oil. Electricity accounted for 29% of total final demand in 1992 as against 20% in 1974, but seems to be stagnant since 1990. Gas, although showing fast growth (4.8% per year), accounted only for 6% of total final demand in 1992. Heat has been the fastest growing energy vector with 7.5% per year over the period and satisfied almost 5% of demand in 1992. Biomass is the third most important fuel for final demand sectors after oil and electricity. In 1992 it accounted for 11% of demand, or almost double the share of gas.

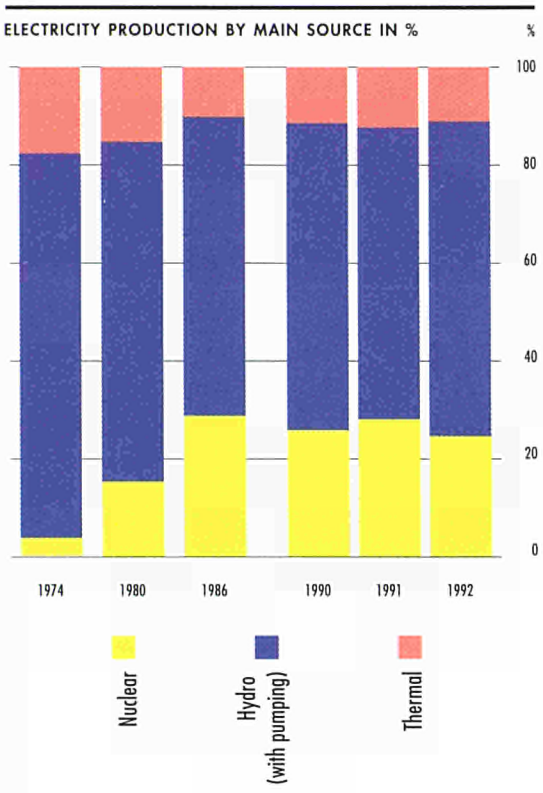
FINAL ENERGY DEMAND: FUEL SHARES



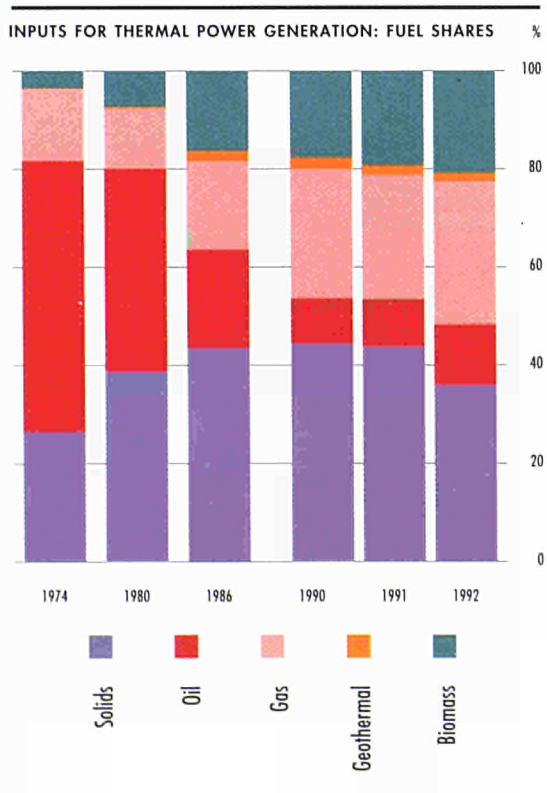
Energy production in the EFTA countries is dominated by oil which accounted for more than 50% of total in 1992, and has increased since 1974 by 20% per year on average. Renewable energy sources (hydro, geothermal and biomass) rank second with 20% of total in 1992; the production of these sources increased on average by 2.5% per year over the period. Nuclear energy is the third more important domestic fuel with 13% of total in 1992. However, nuclear output after an average annual increase of 23% until 1986, stayed more or less flat to 1990 and dropped 11% in 1992. Natural gas production saw significant growth up to 1980 (53% per year), but has practically stagnated since then.

PRIMARY PRODUCTION: FUEL SHARES





Electricity in the EFTA countries is generated mainly from hydro power and nuclear, with 64% and 25% of total generation respectively. While hydro power output has increased almost continuously, nuclear has virtually stagnated since 1986. However, this picture is not homogeneous across EFTA countries. In fact, electricity in Norway is practically all generated from hydro power, while in Finland nuclear production is higher than that from hydro. In Austria, there is no nuclear energy. In terms of fuel inputs for thermal generation, oil has lost share to gas, biomass, and even solids over the period.



Of the EFTA countries, Austria, Finland, Norway and Sweden are to become Members of the European Union on 1 January 1995. If these countries had been Members of the European Union since 1974, total gross inland energy consumption would have been higher by 9% in 1974 and 10% in 1992. In fact, these four countries increased their energy consumption in the period faster than the European Union. While the overall increase for the European Union was 14% in the period, Austria, Finland, Norway and Sweden increased their needs by 29%, 40%, 39% and 25% respectively.

Some main indicators and energy developments are described in the following tables.

ENERGY INDICATORS: COMPARISON OF EUROPEAN UNION, AUSTRIA, FINLAND AND SWEDEN

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Energy Intensity (toe/1985 MECU)											
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6
Austria	310	293	272	255	263	261	-0.9	-1.3	-1.6	3.0	-0.4
Finland	398	407	377	340	371	391	0.4	-1.3	-2.6	9.1	5.3
Norway	312	292	274	257	255	242	-1.1	-1.0	-1.6	-0.9	-5.1
Sweden	339	340	368	328	344	331	0.1	1.3	-2.8	4.8	-3.7
European Union Enlarged	377	350	324	301	303	298	-1.3	-1.3	-1.8	0.6	-1.6
Gross Inland Consumption per Capita (toe/inhabitant)											
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9
Austria	2.80	3.11	3.10	3.26	3.44	3.46	1.7	0.0	1.2	5.5	0.6
Finland	4.45	5.23	5.55	5.70	5.74	5.78	2.7	1.0	0.7	0.7	0.7
Norway	3.83	4.61	5.22	5.07	5.10	4.96	3.1	2.1	-0.7	0.5	-2.8
Sweden	4.57	4.93	5.93	5.58	5.73	5.38	1.3	3.1	-1.5	2.6	-6.0
European Union Enlarged	3.27	3.43	3.47	3.58	3.61	3.57	0.8	0.2	0.8	1.0	-1.1
Energy Dependency (%)											
European Union	62.0	54.3	42.6	47.9	49.6	50.8	-2.2	-3.9	3.0	3.5	2.5
Austria	64.5	70.5	69.9	69.9	67.9	69.3	1.5	-0.1	0.0	-2.9	2.1
Finland	84.1	72.8	63.0	62.8	58.4	55.9	-2.4	-2.4	-0.1	-7.0	-4.3
Norway	44.0	-189.1	-248.4	-438.6	-491.6	-565.7	-	4.7	15.3	12.1	15.1
Sweden	79.1	67.0	44.8	38.2	35.6	37.4	-2.7	-6.5	-3.9	-6.8	5.2
European Union Enlarged	62.8	51.7	38.7	40.4	40.9	41.0	-3.2	-4.7	1.1	1.2	0.3
Gross Inland Consumption (Mtoe)											
European Union	1054.6	1123.1	1139.2	1197.3	1212.6	1206.8	1.1	0.2	1.3	1.3	-0.5
Austria	21.1	23.4	23.5	25.4	26.9	27.2	1.8	0.0	2.0	6.2	1.1
Finland	20.9	25.0	27.3	28.5	28.9	29.2	3.1	1.5	1.0	1.5	1.1
Norway	15.3	18.9	21.8	21.5	21.7	21.3	3.6	2.4	-0.3	1.0	-2.1
Sweden	37.3	41.0	49.6	47.8	49.4	46.7	1.6	3.2	-0.9	3.3	-5.3
European Union Enlarged	1149.2	1231.4	1261.3	1320.4	1339.5	1331.2	1.2	0.4	1.2	1.4	-0.6

EFTA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	35.6	93.8	135.3	179.4	191.2	203.9	17.5	6.3	7.3	6.6	6.6
Solids	1.4	1.1	1.2	0.8	0.8	0.8	-4.9	2.2	-8.5	-7.8	4.3
Oil	4.1	26.5	44.7	85.6	97.5	111.1	36.6	9.1	17.6	13.9	14.0
Natural gas	1.9	24.5	25.2	25.3	24.9	25.5	52.7	0.5	0.0	-1.5	2.3
Nuclear	2.4	12.5	29.1	28.9	31.2	27.8	31.8	15.2	-0.1	7.7	-10.7
Hydro	17.1	18.7	20.4	23.2	21.9	23.5	1.5	1.5	3.3	-5.8	7.3
Geothermal	0.0	0.0	0.2	0.3	0.2	0.2	35.7	28.5	7.5	-5.7	-18.7
Biomass	8.7	10.5	14.4	15.3	14.8	15.0	3.2	5.4	1.4	-3.4	1.5
Net Imports	83.8	41.9	17.0	-25.9	-39.3	-53.7	-10.9	-14.0	-	51.6	36.7
Solids	9.5	9.6	11.9	11.3	10.3	10.9	0.2	3.7	-1.3	-8.4	6.1
Oil	72.3	50.7	21.7	-23.2	-37.2	-51.2	-5.7	-13.2	-	60.3	37.4
Crude oil	*37.5*	*28.6*	*2.2*	*-30.9*	*-43.1*	*-55.8*	*-4.5*	*-34.9*	-	*39.2*	*29.6*
Oil products	*34.7*	*22.1*	*19.5*	*7.7*	*5.8*	*4.7*	*-7.2*	*-2.1*	*-20.7*	*-24.3*	*-19.9*
Natural gas	2.5	-17.5	-16.2	-13.3	-12.6	-12.9	-	-1.3	-4.8	-4.7	2.0
Electricity	-0.5	-0.9	-0.6	-0.8	0.1	-0.6	11.5	-7.2	8.4	-	-
Biomass	0.0	0.0	0.2	0.1	0.2	0.0	23.1	41.8	-4.9	27.1	-91.3
Gross Inland Consumption	113.7	130.2	147.3	149.3	153.4	151.0	2.3	2.1	0.3	2.7	-1.5
Solids	9.8	11.2	11.9	12.4	12.1	11.9	2.1	1.2	0.9	-2.1	-1.6
Oil	71.8	71.6	63.3	58.6	60.2	60.1	-0.1	-2.0	-1.9	2.8	-0.2
Natural gas	4.4	6.8	9.1	11.6	12.2	12.4	7.8	4.8	6.4	4.8	2.0
Other *(1)*	27.7	40.6	63.0	66.7	68.9	66.6	6.6	7.6	1.4	3.2	-3.4
Electricity Generation in TWh	252.3	313.8	388.7	430.5	427.3	432.5	3.7	3.6	2.6	-0.8	1.2
Nuclear	9.1	47.9	111.6	111.0	119.6	106.3	31.8	15.2	-0.1	7.7	-11.1
Hydro	198.7	217.3	237.4	270.0	254.3	278.1	1.5	1.5	3.3	-5.8	9.4
Thermal	44.4	48.6	39.7	49.5	53.4	48.1	1.5	-3.3	5.6	7.9	-9.8
Generation Capacity in GWe	65.3	86.2	101.0	107.6	108.1	109.1	4.7	2.7	1.6	0.5	0.9
Nuclear	2.1	8.8	14.9	15.3	15.3	15.3	27.2	9.3	0.6	0.2	0.0
Hydro	47.3	57.3	65.3	69.2	69.3	69.5	3.2	2.2	1.4	0.2	0.2
Thermal	16.0	20.2	20.8	23.1	23.5	24.3	4.0	0.5	2.7	1.7	3.3
Average Load Factor in %	44.1	41.5	43.9	45.7	45.1	45.3	-1.0	0.9	1.0	-1.3	0.4
Fuel Inputs for Thermal Power Generation	7.4	9.6	8.9	10.4	11.4	10.4	4.4	-1.3	4.2	9.5	-9.0
Solids	1.9	3.7	3.8	4.6	5.0	3.7	11.4	0.6	4.8	7.7	-25.1
Oil	4.1	3.9	1.8	1.0	1.1	1.3	-0.7	-12.4	-14.2	14.7	16.3
Gas	1.1	1.2	1.6	2.7	2.9	3.0	1.2	5.3	14.6	5.1	5.1
Geothermal	0.0	0.0	0.2	0.3	0.2	0.2	35.7	28.5	7.5	-5.7	-18.7
Biomass	0.3	0.7	1.5	1.8	2.2	2.2	18.1	12.7	6.2	20.1	-2.3
Average Thermal Efficiency in %	51.7	43.7	38.6	40.7	40.1	39.8	-2.8	-2.1	1.4	-1.5	-0.9
Non-Energy Uses	4.3	4.0	4.6	4.8	4.7	5.0	-1.1	2.6	0.6	-0.9	6.9
Total Final Energy Demand	96.4	105.7	108.5	111.1	112.8	112.6	1.5	0.4	0.6	1.5	-0.1
Solids	6.8	6.1	6.3	5.9	5.6	5.1	-1.7	0.6	-1.8	-4.4	-9.3
Oil	58.3	59.4	52.4	51.1	51.6	51.3	0.3	-2.1	-0.6	0.9	-0.4
Gas	2.9	4.3	4.8	6.2	6.9	6.7	6.7	1.7	6.9	10.6	-2.9
Electricity	18.8	23.1	29.0	31.8	32.2	32.2	3.4	3.9	2.3	1.2	-0.1
Heat	1.4	3.9	5.0	4.5	5.0	5.1	18.1	4.3	-2.4	10.3	0.9
Biomass	8.1	8.9	11.0	11.6	11.5	12.3	1.6	3.5	1.2	-0.6	7.0
CO2 Emissions in Mt of CO2											
Total	257	273	259	262	267	261	1.0	-0.9	0.3	1.7	-2.1
Excluding Bunkers and Air Transport	252	267	250	252	256	250	1.0	-1.0	0.1	1.8	-2.3
Indicators											
Population (Million)	31.03	31.28	31.76	32.54	32.80	33.06	0.1	0.3	0.6	0.8	0.8
GDP (Index 1985 = 100)	79.9	90.0	102.5	113.5	112.8	112.5	2.0	2.2	2.6	-0.6	-0.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	291	296	293	269	278	274	0.3	-0.1	-2.2	3.3	-1.3
Gross Inl. Consumption/Capita (toe/inhabitant)	3.67	4.16	4.64	4.59	4.68	4.57	2.1	1.8	-0.3	1.9	-2.3
Electricity Generated/Capita (kWh/inhabitant)	8130	10032	12240	13230	13026	13082	3.6	3.4	2.0	-1.5	0.4
CO2 Emissions/Capita (t of CO2/inhabitant)	8.30	8.74	8.15	8.06	8.13	7.89	0.9	-1.2	-0.3	0.9	-2.9
Import Dependency (%)	72.5	31.8	11.4	-17.2	-25.3	-35.1	-12.9	-15.7	-	47.6	38.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

AUSTRIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	7.9	7.7	7.6	8.0	8.1	8.1	-0.6	-0.2	1.3	0.9	1.0
Solids	1.1	0.8	0.9	0.6	0.5	0.5	-4.5	1.0	-8.1	-15.0	-0.9
Oil	2.3	1.5	1.2	1.2	1.4	1.4	-6.6	-4.5	1.2	11.0	0.8
Natural gas	1.9	1.7	1.0	1.1	1.1	1.2	-2.1	-8.9	3.5	1.9	4.3
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.9	2.5	2.7	2.7	2.7	2.7	4.4	1.3	0.3	0.4	0.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.7	1.1	1.9	2.3	2.3	2.3	8.4	8.8	5.4	0.2	1.0
Net Imports	13.6	16.5	16.4	17.7	18.3	18.9	3.3	-0.1	1.9	3.1	3.3
Solids	3.2	2.8	3.4	3.1	3.3	3.8	-2.3	3.4	-2.4	5.7	14.7
Oil	8.9	11.4	9.4	10.0	10.4	10.5	4.2	-3.1	1.5	3.7	0.7
Crude oil	*6.6*	*8.8*	*7.3*	*8.1*	*8.4*	*7.5*	*4.7*	*-3.0*	*2.5*	*3.7*	*-9.8*
Oil products	*2.2*	*2.6*	*2.1*	*2.0*	*2.0*	*2.9*	*2.6*	*-3.3*	*-2.0*	*3.6*	*43.3*
Natural gas	1.8	2.7	3.5	4.5	4.4	4.6	7.2	4.6	6.3	-3.0	4.8
Electricity	-0.3	-0.3	-0.1	0.0	0.1	0.1	5.0	-15.3	-	-	0.0
Biomass	0.0	0.0	0.2	0.1	0.2	0.0	-	-	-	-	-
Gross Inland Consumption	21.1	23.4	23.5	25.4	26.9	27.2	1.8	0.0	2.0	6.2	1.1
Solids	4.2	3.7	3.9	4.1	4.3	4.3	-2.2	0.9	1.8	3.1	0.6
Oil	10.9	12.3	10.6	10.9	12.0	12.0	2.0	-2.5	0.8	9.8	0.7
Natural gas	3.6	4.2	4.5	5.2	5.4	5.6	2.5	1.1	4.1	3.8	3.8
Other *(1)*	2.4	3.3	4.6	5.1	5.3	5.2	5.6	5.8	2.7	3.5	-0.5
Electricity Generation in TWh	33.4	41.6	44.1	49.4	50.4	49.9	3.7	1.0	2.9	2.0	-0.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	22.2	28.7	31.1	31.5	31.6	34.8	4.4	1.3	0.3	0.4	10.1
Thermal	11.2	12.9	13.0	17.9	18.8	15.1	2.3	0.1	8.4	4.7	-19.5
Generation Capacity in GWe	9.2	12.9	15.8	16.7	16.8	17.2	5.8	3.4	1.4	0.6	2.7
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	6.0	8.2	10.4	10.9	11.0	11.1	5.3	4.1	1.2	0.7	0.6
Thermal	3.2	4.7	5.4	5.7	5.8	6.1	6.5	2.1	1.7	0.2	6.7
Average Load Factor in %	41.3	36.7	31.9	33.8	34.3	33.1	-1.9	-2.3	1.5	1.4	-3.5
Fuel Inputs for Thermal Power Generation	2.4	2.2	2.6	4.1	4.2	3.6	-1.2	2.9	11.6	3.2	-14.4
Solids	0.9	0.8	1.0	1.7	1.8	1.1	-1.8	3.9	14.4	7.1	-37.5
Oil	0.4	0.5	0.3	0.4	0.4	0.5	4.5	-7.0	6.5	-4.9	7.2
Gas	1.1	0.8	1.2	1.8	1.8	1.9	-4.4	6.0	10.9	0.9	5.3
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.0	0.1	0.1	0.2	0.2	0.2	20.0	11.5	8.6	8.9	-31.8
Average Thermal Efficiency in %	40.5	50.0	42.3	37.7	38.3	36.0	3.6	-2.7	-2.8	1.4	-5.9
Non-Energy Uses	0.9	1.1	1.2	1.4	1.4	1.4	2.2	2.4	2.5	1.1	1.8
Total Final Energy Demand	16.4	18.7	19.0	19.9	21.1	20.8	2.2	0.3	1.1	6.1	-1.4
Solids	3.0	2.8	2.6	2.1	2.1	1.9	-1.4	-1.0	-5.4	2.0	-12.1
Oil	8.3	8.9	8.0	8.3	9.0	8.7	1.2	-1.9	1.0	9.3	-3.6
Gas	2.1	3.0	2.9	3.1	3.3	3.1	5.8	-0.5	1.9	6.6	-5.0
Electricity	2.3	2.8	3.2	3.7	3.9	3.8	3.8	2.1	3.7	4.4	-1.0
Heat	0.0	0.2	0.5	0.6	0.6	0.7	-	17.8	4.8	4.7	4.5
Biomass	0.7	1.1	1.9	2.1	2.1	2.6	7.8	10.0	3.3	0.7	21.4
CO2 Emissions in Mt of CO2											
Total	53	56	56	61	64	60	1.0	-0.1	2.0	5.8	-6.2
Excluding Bunkers and Air Transport	53	56	55	59	63	59	0.9	-0.2	1.9	5.6	-6.4
Indicators											
Population (Million)	7.53	7.55	7.56	7.79	7.84	7.88	0.0	0.0	0.8	0.6	0.5
GDP (Index 1985 = 100)	79.7	93.7	101.2	116.5	120.1	122.0	2.7	1.3	3.6	3.1	1.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	310	293	272	255	263	261	-0.9	-1.3	-1.6	3.0	-0.4
Gross Inl. Consumption/Capita (toe/inhabitant)	2.80	3.11	3.10	3.26	3.44	3.46	1.7	0.0	1.2	5.5	0.6
Electricity Generated/Capita (kWh/inhabitant)	4436	5510	5830	6344	6426	6336	3.7	0.9	2.1	1.3	-1.4
CO2 Emissions/Capita (t of CO2/inhabitant)	7.07	7.46	7.40	7.77	8.17	7.63	0.9	-0.1	1.2	5.2	-6.7
Import Dependency (%)	64.5	70.5	69.9	69.9	67.9	69.3	1.5	-0.1	0.0	-2.9	2.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass

FINLAND: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	5.0	6.9	11.3	11.3	10.7	10.8	5.5	8.6	0.0	-5.5	1.2
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Nuclear	0.0	1.8	5.0	5.0	5.1	5.2	-	18.1	0.2	1.5	1.6
Hydro	1.1	0.9	1.1	0.9	1.1	1.1	-3.5	3.3	-3.2	20.6	0.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	3.9	4.2	5.3	5.4	4.5	4.6	1.2	4.0	0.5	-16.5	1.0
Net Imports	17.6	18.6	17.5	18.2	17.2	16.7	0.9	-1.0	1.0	-5.7	-2.8
Solids	3.2	3.8	4.2	4.5	3.9	4.2	3.1	1.7	1.9	-14.5	8.1
Oil	13.8	13.9	11.8	10.5	10.3	9.4	0.2	-2.7	-2.9	-2.1	-8.8
Crude oil	*9.6*	*13.1*	*9.5*	*8.9*	*10.1*	*9.1*	*5.3*	*-5.3*	*-1.7*	*13.9*	*-9.8*
Oil products	*4.2*	*0.8*	*2.3*	*1.6*	*0.2*	*0.3*	*-23.9*	*19.3*	*-8.4*	*-88.5*	*43.3*
Natural gas	0.4	0.8	1.0	2.3	2.4	2.5	13.1	3.7	23.0	5.7	4.8
Electricity	0.3	0.1	0.5	0.9	0.6	0.6	-14.7	29.5	16.8	-31.5	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	20.9	25.0	27.3	28.5	28.9	29.2	3.1	1.5	1.0	1.5	1.1
Solids	2.6	4.4	3.6	4.2	4.2	4.2	9.6	-3.3	4.0	-2.0	0.6
Oil	12.7	13.0	11.6	10.0	10.4	10.5	0.4	-1.9	-3.6	4.6	0.7
Natural gas	0.4	0.8	1.0	2.3	2.4	2.5	13.1	3.7	23.0	5.7	3.8
Other *(1)*	5.3	6.8	11.1	12.0	11.9	12.0	4.3	8.6	1.9	-0.6	1.0
Electricity Generation in TWh	27.6	40.7	49.3	54.4	58.1	57.4	6.7	3.2	2.5	6.9	-1.2
Nuclear	0.0	7.0	19.1	19.2	19.5	19.3	0.0	18.1	0.2	1.5	-1.1
Hydro	12.6	10.2	12.4	10.9	13.1	15.1	-3.5	3.3	-3.2	20.6	15.6
Thermal	15.0	23.5	17.8	24.3	25.5	23.0	7.8	-4.5	8.1	5.1	-9.9
Generation Capacity in GWe	6.8	11.1	11.5	13.2	13.3	13.5	8.5	0.5	3.6	1.0	1.0
Nuclear	0.0	2.2	2.3	2.4	2.4	2.4	-	0.7	0.6	0.0	0.0
Hydro	2.3	2.4	2.5	2.6	2.6	2.7	0.9	0.6	1.1	1.0	1.0
Thermal	4.5	6.5	6.7	8.2	8.3	8.4	6.3	0.5	5.5	1.2	1.2
Average Load Factor in %	46.5	41.9	49.1	47.0	49.7	48.7	-1.7	2.7	-1.1	5.9	-2.2
Fuel Inputs for Thermal Power Generation	1.6	4.1	3.2	4.1	4.5	3.9	16.7	-4.1	6.1	8.7	-12.5
Solids	1.0	2.9	1.9	2.3	2.4	1.9	20.0	-6.5	4.4	5.5	-21.8
Oil	0.5	0.6	0.3	0.2	0.1	0.2	2.8	-11.6	-12.4	-22.0	11.4
Gas	0.0	0.2	0.3	0.8	0.8	0.8	0.0	4.9	23.5	4.5	1.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.1	0.4	0.7	0.9	1.1	1.1	18.2	9.4	6.5	27.0	-5.1
Average Thermal Efficiency in %	78.4	48.7	47.4	50.9	49.2	50.7	-7.6	-0.5	1.8	-3.3	3.0
Non-Energy Uses	0.9	0.8	1.2	1.1	1.3	1.6	-0.8	5.8	-0.8	11.6	24.9
Total Final Energy Demand	17.4	18.5	19.4	21.8	21.6	21.5	1.0	0.8	2.9	-0.8	-0.5
Solids	1.0	0.8	1.0	1.1	1.1	0.9	-3.0	3.1	4.0	-2.8	-14.3
Oil	9.7	9.8	8.6	8.9	8.9	8.5	0.2	-2.3	1.1	-1.0	-4.2
Gas	0.4	0.5	0.5	1.3	1.3	1.4	4.4	2.8	23.7	5.2	4.7
Electricity	2.4	3.2	4.3	5.1	5.1	5.1	5.2	4.9	4.5	0.3	1.0
Heat	0.6	1.1	1.8	1.9	2.0	2.0	-	-	-	-	0.3
Biomass	3.5	3.1	3.3	3.5	3.2	3.5	-1.9	1.0	1.4	-6.9	9.1
CO2 Emissions in Mt of CO2											
Total	48	56	50	57	57	54	2.6	-2.0	3.2	0.4	-5.3
Excluding Bunkers and Air Transport	48	56	49	55	55	53	2.6	-2.1	2.9	0.5	-5.2
Indicators											
Population (Million)	4.69	4.78	4.92	4.99	5.03	5.05	0.3	0.5	0.4	0.8	0.4
GDP (Index 1985 = 100)	74.0	86.7	102.1	118.1	109.9	105.5	2.7	2.8	3.7	-7.0	-4.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	398	407	377	340	371	391	0.4	-1.3	-2.6	9.1	5.3
Gross Inl. Consumption/Capita (toe/inhabitant)	4.45	5.23	5.55	5.70	5.74	5.78	2.7	1.0	0.7	0.7	0.7
Electricity Generated/Capita (kWh/inhabitant)	5891	8524	10013	10897	11558	11370	6.4	2.7	2.1	6.1	-1.6
CO2 Emissions/Capita (t of CO2/inhabitant)	10.30	11.81	10.16	11.35	11.31	10.66	2.3	-2.5	2.8	-0.4	-5.7
Import Dependency (%)	84.1	72.8	63.0	62.8	58.4	55.9	-2.4	-2.4	-0.1	-7.0	-4.3

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

ICELAND: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.2	0.3	0.5	0.6	0.6	0.6	7.2	9.4	4.1	-2.4	-6.1
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.2	0.3	0.3	0.4	0.4	0.4	5.1	3.9	2.0	0.0	2.4
Geothermal	0.0	0.0	0.2	0.3	0.2	0.2	35.7	28.5	7.5	-5.7	-18.7
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Imports	0.6	0.6	0.6	0.8	0.7	0.8	-1.1	0.9	6.0	-13.7	14.7
Solids	0.0	0.0	0.1	0.1	0.1	0.0	0.0	26.6	-4.6	2.7	-29.2
Oil	0.6	0.6	0.6	0.7	0.6	0.8	-1.6	-0.6	7.1	-15.0	19.0
Crude oil	*0*	*0*	*0*	*0*	*0*	*0*	-	-	-	-	-
Oil products	*0.6*	*0.6*	*0.6*	*0.7*	*0.6*	*0.8*	*-1.6*	*-0.6*	*7.1*	*-15.0*	*19.0*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	0.8	0.9	1.2	1.4	1.3	1.3	1.7	3.6	5.2	-8.4	-0.9
Solids	0.0	0.0	0.1	0.1	0.1	0.0	0.0	26.6	-4.6	2.7	-29.2
Oil	0.6	0.6	0.6	0.8	0.6	0.7	-0.8	-1.4	7.3	-14.3	6.6
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Other *(1)*	0.2	0.3	0.5	0.6	0.6	0.6	7.2	9.4	4.1	-2.4	-6.1
Electricity Generation in TWh	2.4	3.2	4.1	4.5	4.5	4.5	5.0	4.4	2.3	-0.4	1.0
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	2.3	3.1	3.9	4.2	4.2	4.3	5.1	3.9	2.0	0.0	2.4
Thermal	0.1	0.1	0.2	0.3	0.3	0.2	2.0	15.5	7.4	-5.2	-19.0
Generation Capacity in GWe	0.5	0.7	0.7	0.9	1.0	1.0	5.8	0.0	8.1	2.8	2.8
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.4	0.5	0.5	0.8	0.8	0.8	6.2	0.0	8.5	3.0	3.0
Thermal	0.1	0.1	0.1	0.2	0.2	0.2	4.3	0.0	6.3	1.6	1.6
Average Load Factor in %	54.9	52.5	67.9	54.5	52.9	52.0	-0.7	4.4	-5.3	-3.0	-1.7
Fuel Inputs for Thermal Power Generation	0.0	0.1	0.2	0.3	0.2	0.2	11.9	24.2	7.5	-5.6	-18.6
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	0.0	0.0	0.0	0.0	0.0	0.0	-10.9	-32.0	20.4	-	-
Gas	0	0	0	0	0	0	-	-	-	-	-
Geothermal	0.0	0.0	0.2	0.3	0.2	0.2	35.7	28.5	7.5	-5.7	-18.7
Biomass	0	0	0	0	0	0	-	-	-	-	-
Average Thermal Efficiency in %	27.3	15.7	10.2	10.1	10.2	10.1	-8.8	-7.0	-0.1	0.4	-0.5
Non-Energy Uses	0.0	0.0	0.1	0.1	0.1	0.1	4.5	10.9	16.5	-0.3	0.0
Total Final Energy Demand	0.8	0.8	0.9	1.0	1.0	1.0	0.3	1.5	4.3	-7.5	3.3
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	-3.5	-7.1	-17.0
Oil	0.6	0.5	0.5	0.6	0.6	0.6	-1.7	-0.9	5.7	-11.4	5.4
Gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.2	0.2	0.3	0.3	0.3	0.4	5.1	3.9	3.0	-0.3	2.0
Heat	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
CO2 Emissions in Mt of CO2											
Total	1.9	1.7	1.8	2.1	1.9	2.0	-1.6	0.4	4.9	-11.1	3.7
Excluding Bunkers and Air Transport	1.7	1.6	1.6	1.9	1.7	1.7	-1.3	0.4	3.8	-10.9	2.2
Indicators											
Population (Million)	0.22	0.23	0.24	0.25	0.26	0.26	0.7	0.9	1.0	4.0	1.2
GDP (Index 1985 = 100)	11.5	13.0	107.3	113.0	114.7	114.2	2.0	42.2	1.3	1.5	-0.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	1955	1926	289	336	304	302	-0.2	-27.1	3.9	-9.8	-0.5
Gross Inl. Consumption/Capita (toe/inhabitant)	3.88	4.13	4.85	5.72	5.04	4.93	1.1	2.7	4.2	-11.9	-2.1
Electricity Generated/Capita (kWh/inhabitant)	10826	13965	17142	18040	17285	17266	4.3	3.5	1.3	-4.2	-0.1
CO2 Emissions/Capita (t of CO2/inhabitant)	8.75	7.61	7.39	8.58	7.34	7.52	-2.3	-0.5	3.8	-14.5	2.5
Import Dependency (%)	76.0	64.2	54.9	56.5	53.2	60.7	-2.8	-2.6	0.7	-5.8	14.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

NORWAY: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	9.0	55.7	77.3	120.1	130.5	145.4	35.4	5.6	11.6	8.7	11.4
Solids	0.3	0.2	0.3	0.2	0.2	0.3	-6.7	7.2	-9.7	11.8	15.3
Oil	1.8	25.0	43.6	84.4	96.1	109.8	55.3	9.7	18.0	13.9	14.2
Natural gas	0.0	22.8	24.3	24.1	23.7	24.3	251.4	1.1	-0.1	-1.6	2.2
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	6.6	7.2	8.3	10.4	9.5	10.0	1.5	2.4	5.9	-9.1	6.1
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.4	0.6	0.9	1.0	1.0	1.0	9.0	6.4	3.0	-0.8	5.4
Net Imports	6.9	-36.2	-54.9	-96.3	-108.7	-123.1	-	7.2	15.1	12.9	13.2
Solids	0.8	0.8	0.8	0.7	0.5	0.6	0.3	-0.3	-3.7	-18.0	13.4
Oil	6.6	-15.1	-33.8	-73.4	-87.0	-100.4	-	14.4	21.4	18.5	15.4
Crude oil	*4.9*	*-16.1*	*-35.2*	*-68.4*	*-82.9*	*-94.3*	-	*13.9*	*18.1*	*21.1*	*13.8*
Oil products	*1.8*	*1.1*	*1.5*	*-5.0*	*-4.2*	*-6.2*	*-7.8*	*5.2*	-	*-16.8*	*48.1*
Natural gas	0.0	-21.9	-22.1	-22.2	-22.0	-22.5	0.0	0.2	0.0	-0.9	2.5
Electricity	-0.5	0.0	0.2	-1.4	-0.2	-0.8	-33.9	-	-	-82.3	211.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	15.3	18.9	21.8	21.5	21.7	21.3	3.6	2.4	-0.3	1.0	-2.1
Solids	1.0	1.0	1.0	0.9	0.8	0.8	-0.3	0.6	-4.6	-8.5	1.4
Oil	7.8	9.2	9.3	8.6	8.9	8.4	2.9	0.1	-1.8	3.7	-6.4
Natural gas	0.0	0.9	2.1	2.0	1.8	1.8	103.9	16.1	-1.8	-10.2	-0.8
Other *(1)*	6.5	7.8	9.3	10.1	10.2	10.3	3.1	3.1	1.9	1.6	1.2
Electricity Generation in TWh	76.7	83.8	96.7	121.6	110.5	117.2	1.5	2.4	5.9	-9.1	6.1
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	76.6	83.6	96.2	121.1	110.1	116.8	1.5	2.4	5.9	-9.1	6.1
Thermal	0.1	0.1	0.5	0.5	0.4	0.4	16.1	22.6	0.1	-8.4	-1.2
Generation Capacity in GWe	16.4	20.0	24.8	27.1	27.1	27.1	3.4	3.6	2.3	0.0	0.0
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	16.2	19.8	24.5	26.9	26.9	26.9	3.3	3.7	2.3	0.0	0.0
Thermal	0.2	0.2	0.3	0.3	0.3	0.3	6.5	1.1	-0.2	0.0	0.0
Average Load Factor in %	53.4	47.8	44.5	51.2	46.5	49.3	-1.8	-1.2	3.5	-9.1	6.1
Fuel Inputs for Thermal Power Generation	0.0	0.0	0.1	0.1	0.1	0.1	7.3	26.4	-7.2	17.7	-17.0
Solids	0.0	0.0	0.0	0.0	0.0	0.0	-11.6	13.1	21.9	-12.4	9.9
Oil	0.0	0.0	0.1	0.0	0.0	0.0	25.3	20.4	-60.3	0.0	-52.4
Gas	0	0	0	0	0	0	-	-	-	-	-
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.0	0.0	0.0	0.1	0.1	0.1	-	-	12.2	33.5	-25.2
Average Thermal Efficiency in %	20.7	33.1	27.5	37.2	28.9	34.5	8.2	-3.0	7.8	-22.2	19.1
Non-Energy Uses	0.7	0.7	0.9	0.9	0.9	0.9	1.1	4.4	-1.3	3.1	2.1
Total Final Energy Demand	13.3	15.8	17.2	17.3	16.9	16.9	2.9	1.4	0.1	-1.9	-0.2
Solids	1.0	0.9	0.9	0.8	0.7	0.8	-0.7	0.2	-3.7	-10.0	5.8
Oil	6.5	7.8	7.6	7.2	6.9	6.8	3.1	-0.4	-1.5	-3.3	-2.7
Gas	0.0	0.0	0.0	0.0	0.0	0.0	-10.2	-	-	-	-
Electricity	5.5	6.4	7.7	8.3	8.3	8.4	2.6	3.1	1.8	0.0	0.6
Heat	0.0	0.0	0.1	0.1	0.1	0.1	-	-	9.2	17.5	5.0
Biomass	0.3	0.6	0.8	0.9	0.9	0.9	10.5	5.0	1.7	-2.5	7.0
CO2 Emissions in Mt of CO2											
Total	25	32	35	33	31	31	4.2	1.7	-1.5	-4.7	-1.0
Excluding Bunkers and Air Transport	24	30	33	31	30	29	4.0	1.6	-1.6	-4.7	-1.3
Indicators											
Population (Million)	3.99	4.09	4.17	4.24	4.26	4.29	0.4	0.3	0.4	0.5	0.7
GDP (Index 1985 = 100)	64.2	84.8	104.2	109.6	111.7	115.2	4.7	3.5	1.3	1.9	3.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	312	292	274	257	255	242	-1.1	-1.0	-1.6	-0.9	-5.1
Gross Inl. Consumption/Capita (toe/inhabitant)	3.83	4.61	5.22	5.07	5.10	4.96	3.1	2.1	-0.7	0.5	-2.8
Electricity Generated/Capita (kWh/inhabitant)	19211	20477	23181	28682	25938	27319	1.1	2.1	5.5	-9.6	5.3
CO2 Emissions/Capita (t of CO2/inhabitant)	6.22	7.76	8.40	7.77	7.37	7.24	3.7	1.3	-2.0	-5.2	-1.7
Import Dependency (%)	44.0	-189.1	-248.4	-438.6	-491.6	-565.7	-	4.7	15.3	12.1	15.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

SWEDEN: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	9.0	16.1	29.1	29.8	31.6	29.1	10.2	10.3	0.6	6.2	-7.8
Solids	0.0	0.0	0.0	0.0	0.0	0.0	6.7	-15.0	-2.5	156.8	33.7
Oil	0.0	0.0	0.0	0.0	0.0	0.0	-	-26.3	-6.8	-35.5	-50.0
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Nuclear	0.5	6.9	18.2	17.8	20.1	16.6	53.1	17.6	-0.6	13.1	-17.6
Hydro	4.9	5.1	5.2	6.2	5.4	6.4	0.5	0.6	4.4	-12.8	17.6
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	3.5	4.1	5.6	5.7	6.1	6.2	2.6	5.2	0.7	5.5	1.6
Net Imports	30.4	28.0	22.5	18.5	17.8	17.8	-1.4	-3.6	-4.8	-3.5	-0.1
Solids	2.0	1.7	2.9	2.6	2.3	2.2	-3.1	9.7	-3.3	-10.8	-3.4
Oil	28.2	26.3	19.8	15.5	15.1	15.2	-1.1	-4.6	-5.9	-2.8	0.4
Crude oil	*10.2*	*18.1*	*16.2*	*17.4*	*16.6*	*17.4*	*10.0*	*-1.8*	*1.7*	*-4.6*	*4.8*
Oil products	*17.9*	*8.2*	*3.6*	*-1.8*	*-1.5*	*-2.2*	*-12.2*	*-13.0*	-	*-19.7*	*50.3*
Natural gas	0.0	0.0	0.2	0.5	0.6	0.6	-	-	30.3	5.0	13.1
Electricity	0.3	0.0	-0.4	-0.2	-0.1	-0.2	-24.7	-	-21.5	-26.8	66.1
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	37.3	41.0	49.6	47.8	49.4	46.7	1.6	3.2	-0.9	3.3	-5.3
Solids	1.8	1.7	2.9	2.7	2.6	2.4	-0.9	9.3	-1.6	-6.3	-6.0
Oil	26.2	23.1	17.9	14.9	14.8	14.8	-2.1	-4.2	-4.4	-1.0	0.0
Natural gas	0.0	0.0	0.2	0.5	0.6	0.6	-	-	30.3	5.0	13.1
Other *(1)*	9.3	16.1	28.7	29.6	31.5	28.9	9.7	10.0	0.8	6.4	-8.1
Electricity Generation in TWh	75.1	96.3	138.1	146.0	147.3	145.7	4.2	6.2	1.4	0.9	-1.1
Nuclear	2.1	26.5	70.0	68.2	77.1	63.5	53.1	17.6	-0.6	13.1	-17.6
Hydro	57.3	58.9	60.9	72.5	63.3	74.4	0.5	0.6	4.4	-12.8	17.6
Thermal	15.8	11.0	7.2	5.3	6.9	7.8	-5.9	-6.8	-7.4	31.3	12.1
Generation Capacity in GWe	20.8	27.4	33.1	34.2	34.5	34.7	4.7	3.2	0.8	0.9	0.8
Nuclear	1.1	4.6	9.6	10.0	10.0	10.0	27.7	13.1	0.8	0.3	0.0
Hydro	12.3	14.9	15.8	16.3	16.3	16.3	3.2	1.0	0.8	-0.1	-0.1
Thermal	7.4	7.9	7.6	7.9	8.2	8.4	1.2	-0.7	0.8	3.5	3.4
Average Load Factor in %	41.3	40.1	47.6	48.7	48.8	47.9	-0.5	2.9	0.6	0.1	-1.9
Fuel Inputs for Thermal Power Generation	3.0	2.7	2.1	1.3	1.8	2.0	-1.3	-4.7	-10.4	33.1	10.8
Solids	0.1	0.1	0.9	0.7	0.8	0.7	-10.9	60.7	-8.4	19.5	-8.9
Oil	2.8	2.6	0.9	0.3	0.4	0.5	-1.0	-15.9	-27.9	58.9	25.6
Gas	0.0	0.0	0.0	0.1	0.2	0.2	-	-	123.4	64.0	26.2
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.1	0.1	0.2	0.3	0.4	0.5	-1.9	16.0	11.9	29.3	27.4
Average Thermal Efficiency in %	45.7	34.3	30.1	34.3	33.8	34.2	-4.7	-2.1	3.3	-1.3	1.2
Non-Energy Uses	1.2	0.8	0.8	0.8	0.6	0.6	-5.4	-0.6	0.9	-26.3	1.0
Total Final Energy Demand	32.9	34.7	33.4	31.9	31.9	32.2	0.9	-0.6	-1.2	0.2	0.7
Solids	1.5	1.3	1.4	1.5	1.3	1.3	-3.0	1.0	2.2	-9.4	-3.6
Oil	21.0	19.8	15.0	13.4	13.0	13.4	-0.9	-4.5	-2.9	-2.4	3.0
Gas	0.1	0.1	0.2	0.4	0.4	0.4	-4.6	16.5	17.5	-0.7	0.9
Electricity	6.0	7.3	9.8	10.3	10.5	10.3	3.4	5.1	1.3	1.0	-1.2
Heat	0.9	2.4	2.4	1.7	2.0	2.0	18.2	0.3	-8.2	16.6	0.5
Biomass	3.4	3.9	4.6	4.6	4.8	4.8	1.9	3.1	0.1	2.8	-0.3
CO2 Emissions in Mt of CO2											
Total	88	84	70	63	63	65	-0.8	-2.9	-2.6	0.3	2.2
Excluding Bunkers and Air Transport	86	82	68	61	61	62	-0.8	-3.1	-2.8	0.1	2.2
Indicators											
Population (Million)	8.16	8.31	8.37	8.56	8.62	8.68	0.3	0.1	0.6	0.7	0.7
GDP (Index 1985 = 100)	83.4	91.4	102.3	110.4	108.9	107.1	1.5	1.9	1.9	-1.4	-1.7
Gross Inl. Consumption/GDP (toe/1985 MECU)	339	340	368	328	344	331	0.1	1.3	-2.8	4.8	-3.7
Gross Inl. Consumption/Capita (toe/inhabitant)	4.57	4.93	5.93	5.58	5.73	5.38	1.3	3.1	-1.5	2.6	-6.0
Electricity Generated/Capita (kWh/inhabitant)	9205	11590	16497	17053	17089	16784	3.9	6.1	0.8	0.2	-1.8
CO2 Emissions/Capita (t of CO2/inhabitant)	*10.79*	*10.10*	*8.39*	*7.39*	*7.36*	*7.47*	*-1.1*	*-3.1*	*-3.1*	*-0.4*	*1.5*
Import Dependency (%)	79.1	67.0	44.8	38.2	35.6	37.4	-2.7	-6.5	-3.9	-6.8	5.2

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

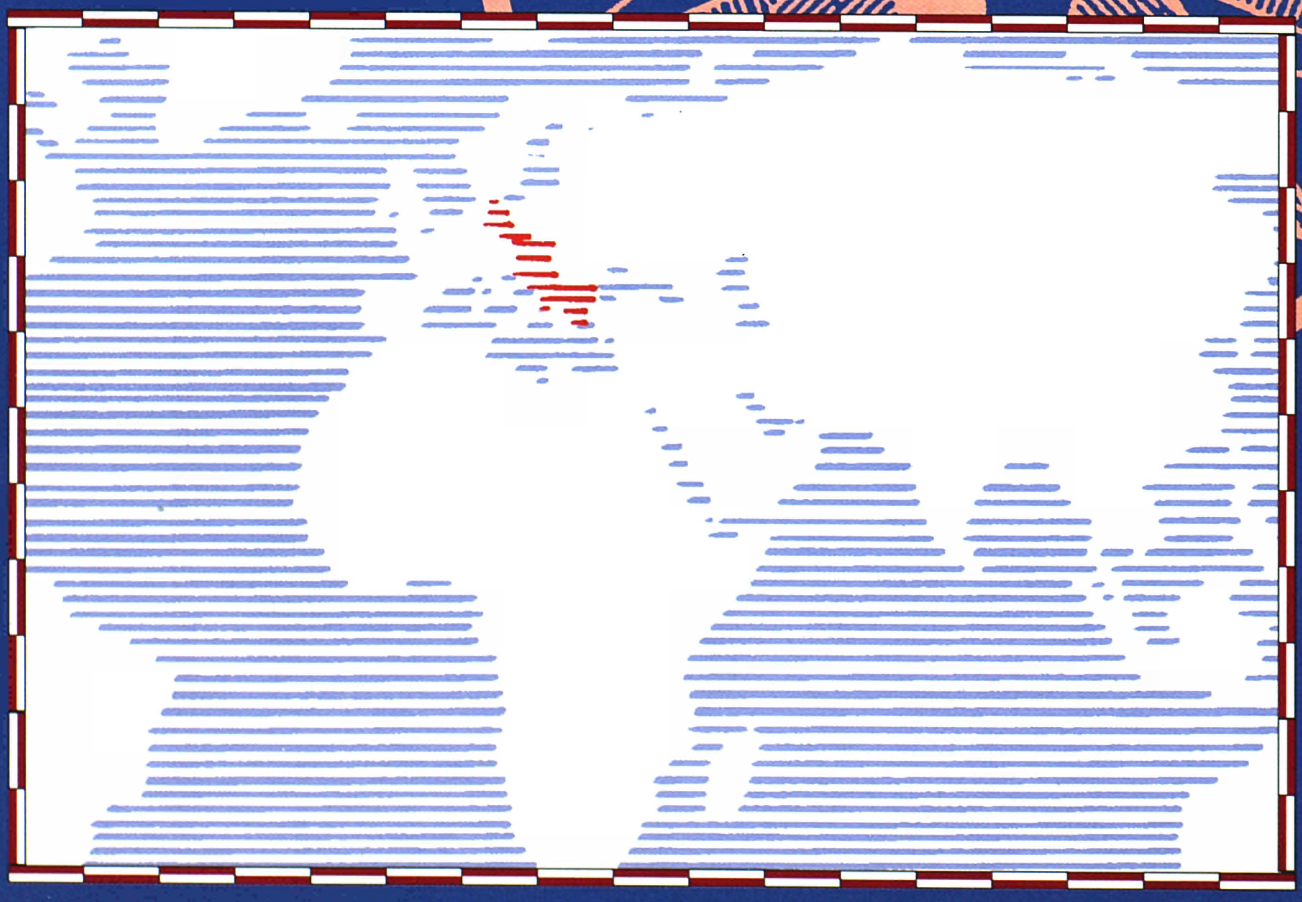
SWITZERLAND: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	4.4	7.0	9.5	9.6	9.6	9.8	8.0	5.2	0.1	0.8	1.8
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	0	0	0	0	0	0	-	-	-	-	-
Natural gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-6.3	-30.6	186.7	-72.1
Nuclear	1.8	3.7	5.9	6.2	6.0	6.1	12.5	7.9	1.1	-2.9	2.2
Hydro	2.4	2.8	2.8	2.6	2.8	2.8	2.8	0.0	-2.4	7.6	2.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.2	0.5	0.8	0.8	0.9	0.9	15.2	9.4	0.9	6.2	-0.4
Net Imports	14.5	14.3	14.8	15.1	15.4	15.2	-0.3	0.6	0.5	1.7	-1.6
Solids	0.3	0.5	0.5	0.3	0.3	0.1	9.6	-1.0	-8.2	-20.5	-53.1
Oil	14.2	13.5	13.8	13.3	13.3	13.5	-0.8	0.3	-0.8	-0.1	1.0
Crude oil	*6.2*	*4.7*	*4.4*	*3.2*	*4.7*	*4.4*	*-4.3*	*-1.3*	*-7.6*	*49.2*	*-7.4*
Oil products	*8.0*	*8.8*	*9.5*	*10.2*	*8.6*	*9.1*	*1.6*	*1.2*	*1.8*	*-15.5*	*5.7*
Natural gas	0.4	1.0	1.3	1.6	2.0	1.9	18.3	4.9	6.1	24.8	-5.4
Electricity	-0.3	-0.7	-0.7	-0.2	-0.2	-0.4	16.7	0.8	-29.6	32.6	53.5
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	18.4	21.0	24.0	24.8	25.2	25.3	2.2	2.3	0.9	1.5	0.5
Solids	0.3	0.3	0.4	0.4	0.3	0.2	2.5	5.1	-5.0	-15.8	-30.8
Oil	13.6	13.3	13.4	13.4	13.4	13.7	-0.3	0.1	0.0	0.2	2.0
Natural gas	0.4	1.0	1.3	1.6	2.0	1.9	18.7	4.8	5.9	25.1	-5.7
Other *(1)*	4.2	6.3	8.8	9.4	9.4	9.4	7.3	5.6	1.6	0.1	0.6
Electricity Generation in TWh	37.1	48.2	56.5	54.6	56.4	57.8	4.4	2.7	-0.9	3.4	2.3
Nuclear	7.1	14.3	22.6	23.6	23.0	23.4	12.5	7.9	1.1	-2.9	2.2
Hydro	27.8	32.8	32.9	29.8	32.1	32.7	2.8	0.0	-2.4	7.6	2.0
Thermal	2.3	1.0	1.1	1.2	1.4	1.6	-12.4	0.5	2.7	21.9	11.9
Generation Capacity in GWe	11.7	14.1	15.2	15.4	15.4	15.5	3.2	1.3	0.3	0.1	0.3
Nuclear	1.0	1.9	3.0	3.0	3.0	3.0	11.6	7.2	0.0	0.0	0.0
Hydro	10.1	11.5	11.5	11.7	11.7	11.7	2.2	0.1	0.3	0.1	0.4
Thermal	0.6	0.7	0.8	0.8	0.8	0.8	2.6	1.2	1.6	0.0	0.0
Average Load Factor in %	36.3	39.0	42.4	40.4	41.8	42.6	1.2	1.4	-1.2	3.3	2.0
Fuel Inputs for Thermal Power Generation	0.3	0.4	0.6	0.6	0.6	0.6	1.2	8.6	-1.5	11.4	3.1
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	-4.7	-83.5	0.0
Oil	0.3	0.1	0.1	0.1	0.1	0.2	-17.4	1.0	-8.6	69.5	24.4
Gas	0.0	0.1	0.1	0.1	0.1	0.1	0.0	-1.6	0.0	19.8	-6.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.0	0.2	0.4	0.4	0.4	0.4	0.0	16.6	0.1	0.5	-1.9
Average Thermal Efficiency in %	57.6	24.2	15.3	18.1	19.8	21.5	-13.4	-7.4	4.3	9.4	8.6
Non-Energy Uses	0.6	0.5	0.4	0.4	0.4	0.4	-2.8	-1.8	-0.4	1.0	-9.7
Total Final Energy Demand	15.6	17.1	18.6	19.3	20.2	20.3	1.6	1.3	0.9	4.7	0.4
Solids	0.3	0.3	0.4	0.3	0.3	0.2	1.2	4.8	-4.5	-13.2	-31.6
Oil	12.2	12.5	12.7	12.7	13.1	13.4	0.3	0.3	0.1	3.1	2.0
Gas	0.4	0.8	1.2	1.5	1.9	1.8	15.1	6.1	6.7	25.9	-5.3
Electricity	2.5	3.0	3.6	4.0	4.1	4.1	3.0	3.1	2.4	2.2	0.6
Heat	0.0	0.2	0.2	0.2	0.3	0.3	0.0	3.7	1.4	16.0	-1.0
Biomass	0.2	0.3	0.4	0.4	0.5	0.5	8.2	4.9	1.4	11.0	0.9
CO2 Emissions in Mt of CO2											
Total	41	43	46	47	49	49	0.9	1.0	0.3	4.9	0.5
Excluding Bunkers and Air Transport	39	41	43	43	45	45	0.8	0.9	0.0	5.8	0.0
Indicators											
Population (Million)	6.44	6.32	6.50	6.71	6.79	6.90	-0.3	0.5	0.8	1.2	1.6
GDP (Index 1985 = 100)	91.6	93.3	102.9	114.3	114.2	114.2	0.3	1.6	2.7	-0.1	-0.1
Gross Inl. Consumption/GDP (toe/1985 MECU)	165	185	192	178	181	182	1.9	0.6	-1.8	1.6	0.5
Gross Inl. Consumption/Capita (toe/inhabitant)	2.85	3.32	3.69	3.70	3.71	3.67	2.5	1.8	0.1	0.3	-1.1
Electricity Generated/Capita (kWh/inhabitant)	5761	7623	8699	8138	8312	8370	4.8	2.2	-1.7	2.1	0.7
CO2 Emissions/Capita (t of CO2/inhabitant)	6.38	6.85	7.08	6.95	7.20	7.12	1.2	0.6	-0.5	3.7	-1.1
Import Dependency (%)	79.0	68.2	62.0	61.0	61.2	59.9	-2.4	-1.6	-0.4	0.2	-2.0

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PARTIE III

CENTRAL AND EASTERN EUROPE



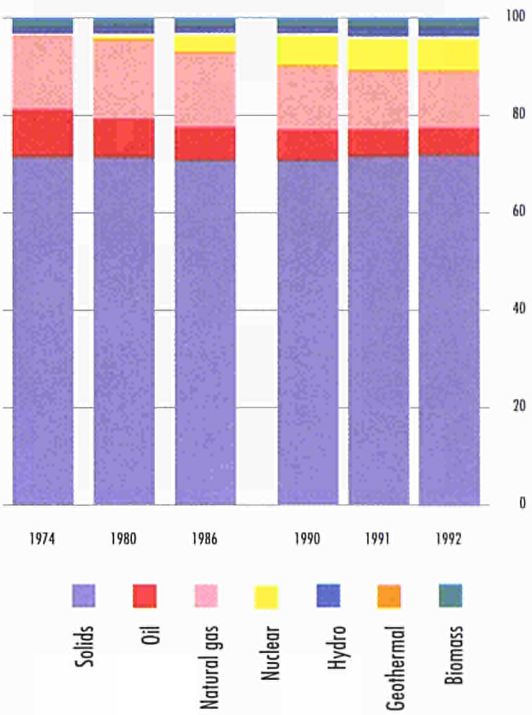
CENTRAL AND EASTERN EUROPE

This region includes the following countries: Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic and the Republics of the former Yugoslavia. Given the lack of sufficient statistical data for the necessary time series, the Czech and Slovak Republics will be shown together as "former Czechoslovakia", and "former Yugoslavia" includes all Republics emerging from the splitting of that country. Although preference should be given to the use of trends rather than absolute values when looking at energy and macroeconomic data for all countries of this region, we try below to give some indications of the developments of energy supply and demand.

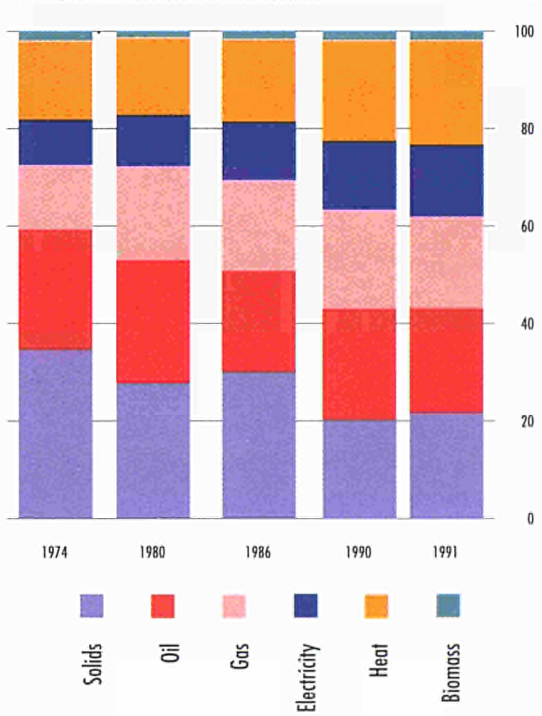
As a whole, the energy needs of this region depended on external supplies for 25% in 1992 (15% in 1974). Between 1974 and 1990 the dependency on outside supplies increased rapidly to 29%. Among the countries of this region, Bulgaria is the most dependent on imports (52% in 1992), but it has been decreasing this degree of dependency since 1974 (76%). On the other hand, Poland which was a net exporter in 1974, has steadily increased its dependency from 2% in 1986 to 5% in 1992. In the case of Bulgaria, the drop in dependency is due to penetration of nuclear energy until 1990, and since then to a significant decrease in primary energy needs. For Poland, the increase in its dependency is due to the fact that consumption grew faster than domestic production until 1986, and since then because although demand is declining, domestic production is significantly reduced (mainly coal). This region has been a net importer of crude oil and natural gas, mainly from the former USSR. On the other hand, these countries together were net exporters of oil products until 1990: since then, they became net importers. In terms of total oil imports, these represented 70% of total oil requirements in 1974 and 79% in 1992. This significant increase is due to a fast drop in domestic crude oil production, mainly in Romania where crude output dropped 55% in the period. Poland is a net exporter of coal, but volumes show a downward trend. Given the economic crisis faced by these countries since the late 1980s, there is in general a common downward trend in both energy production and demand.

Final energy demand in Central and Eastern European countries peaked in 1986 and declined since then. In 1991, total final energy demand was 27% below the 1986 level. This drop in

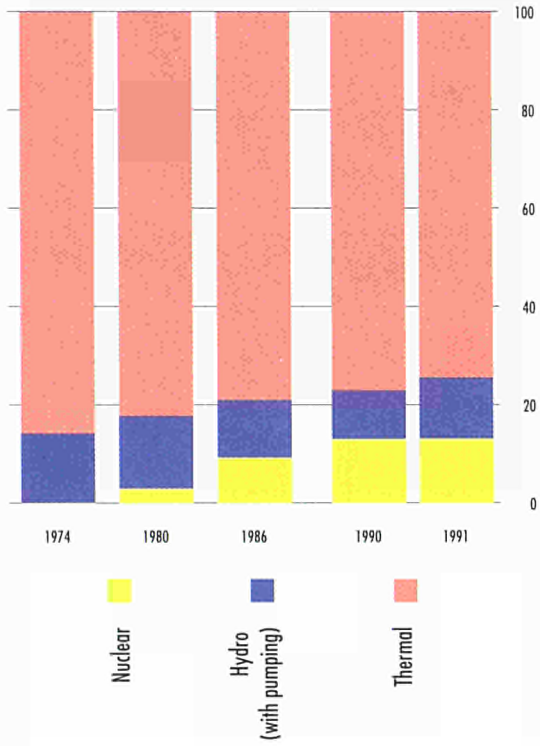
PRIMARY PRODUCTION: FUEL SHARES



FINAL ENERGY DEMAND: FUEL SHARES



ELECTRICITY PRODUCTION BY MAIN SOURCE IN %



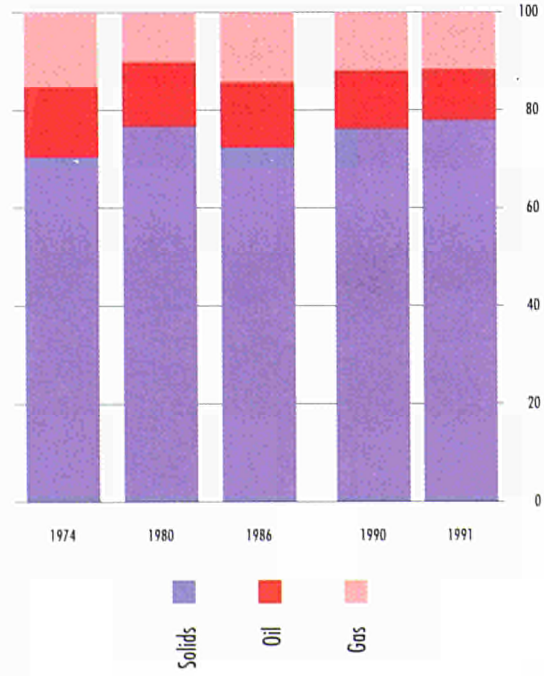
demand was mainly at the expense of solids and oil, also gas to lesser extent. Electricity consumption peaked too in 1986 and dropped slightly to 1991 to a level comparable to that of 1980.

Central and Eastern European countries are practically self-sufficient for electricity consumption. Generation is mainly based on thermal units. Nuclear and hydro power accounted for 13% and 12% respectively of total production in 1991.

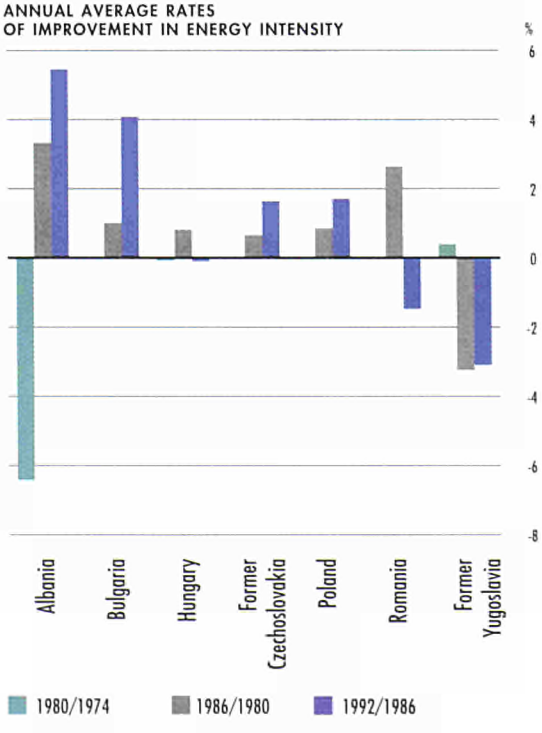
Fuel inputs for thermal power are dominated by solids (78% of total inputs in 1991) and these have increased significantly from 1974 to 1990. Oil and gas have approximately the same share in inputs and there are no clear development trends.

In terms of gross inland consumption per capita, there is a clear negative trend since 1986. This is the result of the economic crisis associated with political reforms, but also imply a loss, to some extent, in the standards of living. Average consumption per capita in 1992 was 35% below the European Union average. The strongest drop occurred in Albania (-61% from 1986 to 1992), while in Hungary this indicator only dropped 14% between 1986 and 1992.

INPUTS FOR THERMAL POWER GENERATION: FUEL SHARES



ANNUAL AVERAGE RATES OF IMPROVEMENT IN ENERGY INTENSITY



The energy intensity of these countries is more than three times higher than that of the European Union. However, the analysis of this ratio is difficult given the statistical uncertainties associated with the estimation of GDP (i.e. the method of determining GDP and exchange rates from national currencies into ECU). For this indicator there are two distinct groups: Albania, Bulgaria and the former Yugoslavia with intensities ranging from 526 to 871 toe/1985 MECU in 1992; and the other four countries showing values between 1120 and 1236 toe/1985 MECU in 1992.

For the analysis of this indicator, three time periods should be considered: up to 1980; from 1980 to 1990; and after 1986. In general, intensities peaked in 1980, improved to 1990 (drop in intensity) and increased since then. The former Yugoslavia is an exception, given the fluctuations in this indicator around a rising trend.

Energy developments in each Central and Eastern European country are described in the following summary energy balances.

CENTRAL AND EASTERN EUROPE: MAIN INDICATORS

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Energy Intensity (toe/1985 MECU)												
CEEC	na	1139	1088	1028	1049	1062	na	-0.8	-1.4	2.0	1.2	na
Albania	622	903	737	538	677	526	6.4	-3.3	-7.6	25.9	-22.3	-0.9
Bulgaria	na	797	750	710	673	584	na	-1.0	-1.4	-5.2	-13.2	na
Former Czechoslovakia	na	1422	1366	1218	1291	1236	na	-0.7	-2.8	6.0	-4.2	na
Hungary	1164	1170	1113	1069	1121	1120	0.1	-0.8	-1.0	4.8	0.0	-0.2
Poland	na	1420	1348	1177	1256	1216	na	-0.9	-3.3	6.6	-3.2	na
Romania	na	1209	1029	1078	1002	1123	na	-2.7	1.2	-7.0	12.1	na
Former Yugoslavia	613	599	725	799	765	871	-0.4	3.3	2.4	-4.2	13.8	2.0
Gross Inland Consumption per Capita (toe/inhabitant)												
CEEC	2.45	3.05	3.15	2.69	2.41	2.25	3.7	0.6	-3.9	-10.3	-6.7	-0.5
Albania	0.76	1.29	1.17	0.77	0.67	0.46	9.1	-1.5	-10.0	-13.1	-31.6	-2.8
Bulgaria	2.49	3.24	3.56	3.06	2.56	2.05	4.5	1.6	-3.7	-16.3	-19.9	-1.1
Former Czechoslovakia	4.14	4.81	4.99	4.47	4.11	3.66	2.5	0.6	-2.7	-8.1	-11.0	-0.7
Hungary	2.16	2.70	2.92	2.79	2.63	2.51	3.8	1.3	-1.1	-5.8	-4.8	0.8
Poland	2.81	3.51	3.46	2.58	2.54	2.48	3.8	-0.3	-7.0	-1.8	-2.3	-0.7
Romania	2.25	2.91	2.90	2.60	2.09	2.02	4.4	-0.1	-2.7	-19.7	-3.3	-0.6
Former Yugoslavia	1.22	1.53	1.87	1.84	1.50	1.39	3.8	3.4	-0.4	-18.6	-7.2	0.7
Energy Dependency (%)												
CEEC	14.7	25.5	24.5	29.3	26.4	24.7	9.7	-0.6	4.5	-9.8	-6.6	2.9
Albania	-50.1	0.1	-18.8	8.0	22.4	29.8	na	na	na	180.3	33.5	na
Bulgaria	75.5	73.3	68.9	61.2	59.9	51.9	-0.5	-1.0	-2.9	-2.2	-13.3	-2.1
Former Czechoslovakia	27.8	33.9	31.4	34.1	34.3	33.8	3.4	-1.3	2.0	0.8	-1.6	1.1
Hungary	41.6	48.1	47.2	49.7	45.1	45.4	2.4	-0.3	1.3	-9.3	0.9	0.5
Poland	-12.1	3.6	2.2	2.3	3.7	4.5	na	-7.9	0.5	64.2	20.4	na
Romania	-0.1	18.3	20.4	35.6	29.6	28.9	na	1.8	14.9	-16.7	-2.5	na
Former Yugoslavia	39.7	44.8	40.2	41.6	34.0	33.3	2.0	-1.8	0.9	-18.4	-2.1	-1.0
Share of Total Gross Inland Consumption (%)												
CEEC												
Albania	0.7	1.0	0.9	0.8	0.7	0.6	6.5	-0.6	-5.0	-1.7	-25.5	-1.0
Bulgaria	7.9	8.0	8.3	8.3	7.7	6.7	0.3	0.7	-0.1	-6.9	-13.8	-0.9
Former Czechoslovakia	22.1	20.5	20.2	21.1	21.5	20.5	-1.2	-0.3	1.0	1.9	-4.6	-0.4
Hungary	8.2	8.1	8.0	8.7	9.1	9.3	-0.3	-0.1	2.1	4.8	2.2	0.7
Poland	34.5	34.9	33.8	29.7	32.6	34.4	0.2	-0.5	-3.2	9.7	5.4	0.0
Romania	17.2	18.0	17.3	18.2	16.3	16.6	0.8	-0.7	1.3	-10.6	2.1	-0.2
Former Yugoslavia	9.4	9.5	11.4	13.2	12.0	12.0	0.2	3.0	3.8	-9.0	-0.6	1.4
CO2 Emissions (Million tonnes of CO2)												
CEEC	806	1000	1041	893	806	na	3.7	0.7	-3.8	-9.8	na	na
Albania	5	8	9	7	6	na	10.4	2.1	-7.5	-11.5	na	na
Bulgaria	65	82	81	69	54	na	3.9	-0.2	-3.8	-22.0	na	na
Former Czechoslovakia	197	233	228	193	175	na	2.8	-0.4	-4.1	-9.3	na	na
Hungary	65	75	72	60	58	na	2.4	-0.5	-4.5	-4.1	na	na
Poland	276	347	362	300	298	na	3.9	0.7	-4.6	-0.7	na	na
Romania	128	173	169	148	123	na	5.1	-0.4	-3.3	-16.9	na	na
Former Yugoslavia	70	82	119	116	92	na	2.6	6.4	-0.7	-20.6	na	na

CENTRAL AND EASTERN EUROPEAN COUNTRIES: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	231.9	267.8	291.1	234.6	217.9	207.0	2.4	1.4	-5.2	-7.1	-5.0
Solids	166.4	191.8	206.4	166.3	156.5	149.2	2.4	1.2	-5.2	-5.9	-4.6
Oil	22.4	21.0	19.7	14.6	12.0	11.4	-1.1	-1.0	-7.2	-18.1	-4.4
Natural gas	35.3	43.5	44.9	31.0	26.4	24.2	3.6	0.5	-8.9	-14.6	-8.6
Nuclear	0.4	2.8	10.8	15.0	14.5	14.1	40.1	25.3	8.6	-3.4	-2.9
Hydro	3.4	4.9	4.6	3.8	4.6	4.2	6.5	-1.2	-4.7	21.6	-9.0
Geothermal	0.0	0.0	0.1	0.0	0.0	0.0	-	-	-	-	-
Biomass	4.1	3.8	4.7	3.9	4.0	4.0	-1.2	3.6	-4.7	1.3	0.1
Net Imports	40.4	91.6	94.2	97.4	78.8	68.3	14.6	0.5	0.8	-19.1	-13.2
Solids	-15.8	-5.9	-4.0	-7.1	-4.9	-9.0	-15.2	-6.3	15.5	-31.0	-
Oil	51.5	77.5	68.7	66.1	50.7	46.1	7.1	-2.0	-1.0	-23.4	-9.0
Crude oil	*54.7*	*82.8*	*77.8*	*68.9*	*49.2*	*44.5*	*7.1*	*-1.0*	*-3.0*	*-28.6*	*-9.5*
Oil products	*-3.2*	*-5.3*	*-9.0*	*-2.7*	*1.5*	*1.6*	*8.5*	*9.4*	*-25.8*	-	*5.4*
Natural gas	4.0	18.9	27.7	35.9	31.6	29.8	29.6	6.6	6.7	-12.0	-5.6
Electricity	0.7	1.1	1.7	2.4	1.4	1.4	8.4	8.6	8.2	-42.2	3.5
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	274.8	358.4	382.9	331.6	297.7	276.6	4.5	1.1	-3.5	-10.2	-7.1
Solids	153.8	186.5	203.1	160.0	150.5	138.7	3.3	1.4	-5.8	-5.9	-7.9
Oil	73.2	97.3	87.1	79.9	65.1	58.4	4.8	-1.8	-2.1	-18.5	-10.3
Natural gas	39.2	62.1	70.7	66.6	57.6	53.6	7.9	2.2	-1.5	-13.4	-6.9
Other *(1)*	8.5	12.6	21.9	25.1	24.4	25.8	6.7	9.7	3.5	-2.8	5.8
Electricity Generation in TWh	279.8	385.7	453.4	444.3	427.2	na	5.5	2.7	-0.5	-3.9	na
Nuclear	1.4	10.7	41.4	57.6	55.7	na	40.1	25.3	8.6	-3.4	na
Hydro	39.1	57.1	53.1	43.8	53.3	na	6.5	-1.2	-4.7	21.6	na
Thermal	239.3	317.9	358.9	342.8	318.2	na	4.8	2.0	-1.1	-7.2	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	81.4	108.7	119.2	121.3	113.9	na	4.9	1.6	0.4	-6.1	na
Solids	57.3	83.2	86.2	92.4	88.7	na	6.4	0.6	1.8	-4.0	na
Oil	11.7	14.3	15.9	14.5	11.9	na	3.4	1.7	-2.4	-17.9	na
Gas	12.4	11.0	17.0	14.4	13.1	na	-2.0	7.5	-4.0	-8.9	na
Geothermal	0.0	0.0	0.1	0.0	0.0	na	-	-	-	-	na
Biomass	0.0	0.1	0.1	0.0	0.2	na	-	-5.3	-20.8	321.6	na
Average Thermal Efficiency in %	25.3	25.2	25.9	24.3	24.0	na	-0.1	0.5	-1.6	-1.1	na
Non-Energy Uses	5.6	6.8	7.3	9.2	8.3	na	3.2	1.2	6.2	-10.1	na
Total Final Energy Demand	203.5	250.5	260.5	215.9	188.9	na	3.5	0.7	-4.6	-12.5	na
Solids	70.8	69.7	78.4	44.2	41.5	na	-0.2	2.0	-13.4	-6.1	na
Oil	50.0	63.1	53.8	49.2	40.3	na	3.9	-2.6	-2.2	-18.1	na
Gas	26.6	47.8	48.2	43.4	35.1	na	10.2	0.1	-2.6	-19.1	na
Electricity	18.9	26.4	31.2	30.5	27.7	na	5.7	2.8	-0.5	-9.0	na
Heat	33.0	39.7	44.1	44.7	40.5	na	3.1	1.8	0.3	-9.4	na
Biomass	4.1	3.7	4.7	3.9	3.8	na	-1.8	4.0	-4.3	-3.1	na
CO2 Emissions in Mt of CO2											
Total	806	1000	1041	893	806	na	3.7	0.7	-3.8	-9.8	na
Excluding Bunkers and Air Transport	802	995	1036	887	801	na	3.7	0.7	-3.8	-9.7	na
Indicators											
Population (Million)	112.1	117.6	121.6	123.4	123.6	123.1	0.8	0.6	0.4	0.1	-0.4
GDP (Index 1985 = 100)	na	92.1	102.9	94.3	83.0	76.2	na	1.9	-2.2	-12.0	-8.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	1139	1088	1028	1049	1062	na	-0.8	-1.4	2.0	1.2
Gross Inl. Consumption/Capita (toe/inhabitant)	2.45	3.05	3.15	2.69	2.41	2.25	3.7	0.6	-3.9	-10.3	-6.7
Electricity Generated/Capita (kWh/inhabitant)	2497	3279	3729	3600	3457	na	4.6	2.2	-0.9	-4.0	na
CO2 Emissions/Capita (t of CO2/inhabitant)	7.16	8.46	8.52	7.19	6.48	na	2.8	0.1	-4.2	-9.9	na
Import Dependency (%)	14.7	25.5	24.5	29.3	26.4	24.7	9.7	-0.6	4.5	-9.8	-6.6

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

ALBANIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	2.7	3.4	4.2	2.3	1.7	1.2	4.0	3.4	-14.3	-25.3	-32.1
Solids	0.3	0.5	0.7	0.5	0.4	0.2	8.9	6.7	-9.5	-11.9	-65.4
Oil	1.8	2.0	2.5	1.1	0.6	0.4	2.1	3.8	-19.2	-43.8	-35.1
Natural gas	0.2	0.3	0.3	0.2	0.2	0.1	11.2	0.0	-11.9	-4.6	-29.2
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.1	0.3	0.3	0.2	0.2	0.2	14.6	2.4	-4.3	-10.6	-3.7
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.4	0.4	0.4	0.3	0.3	0.3	0.0	0.0	-7.0	-6.4	4.0
Net Imports	-0.9	0.0	-0.7	0.2	0.5	0.5	-	-	-	147.2	-7.6
Solids	0.1	0.1	0.2	0.2	0.1	0.1	7.3	6.0	-1.0	-38.0	-5.9
Oil	-0.9	-0.1	-0.8	0.0	0.4	0.4	-36.4	51.9	-	-	0.0
Crude oil	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*	*0.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Oil products	*-0.9*	*-0.1*	*-0.8*	*0.0*	*-0.2*	*-0.2*	*-36.4*	*51.9*	-	-	*0.0*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.0	0.0	-0.1	0.0	0.0	0.0	2.1	4.5	-	66.7	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	1.8	3.4	3.5	2.5	2.2	1.5	11.3	0.5	-8.3	-11.8	-30.8
Solids	0.4	0.6	0.9	0.6	0.5	0.2	8.6	6.6	-7.8	-16.0	-55.3
Oil	0.8	1.9	1.7	1.1	1.0	0.6	15.4	-1.9	-10.2	-13.5	-35.4
Natural gas	0.2	0.3	0.3	0.2	0.2	0.1	11.2	0.0	-11.9	-4.6	-29.2
Other *(1)*	0.4	0.6	0.6	0.5	0.5	0.5	4.5	0.7	-2.9	-5.9	3.2
Electricity Generation in TWh	1.9	3.7	3.9	3.2	2.8	2.7	11.8	0.7	-4.8	-12.2	-3.2
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.3	3.0	3.4	2.8	2.6	2.5	14.6	2.4	-4.3	-10.5	-3.7
Thermal	0.6	0.8	0.5	0.3	0.3	0.3	4.1	-7.5	-8.2	-26.7	1.6
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	0.2	0.2	0.3	0.3	0.3	na	0.4	3.4	1.2	-2.0	na
Solids	0.0	0.1	0.1	0.1	0.1	na	12.7	4.9	2.6	-3.6	na
Oil	0.2	0.2	0.2	0.2	0.2	na	-3.2	2.6	-0.8	-1.1	na
Gas	0	0	0	0	0	na	-	-	-	-	na
Geothermal	0	0	0	0	0	na	-	-	-	-	-
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	22.9	28.5	14.6	9.9	7.4	na	3.7	-10.5	-9.3	-25.2	na
Non-Energy Uses	0.0	0.3	0.1	0.0	0.0	na	50.4	-15.8	-33.1	-50.0	na
Total Final Energy Demand	1.7	3.0	3.2	2.5	2.2	na	10.0	1.3	-6.6	-10.5	na
Solids	0.3	0.5	0.8	0.5	0.4	na	8.3	6.8	-10.2	-16.8	na
Oil	0.7	1.5	1.5	1.1	1.0	na	13.7	-0.2	-6.9	-12.0	na
Gas	0.2	0.3	0.3	0.2	0.2	na	11.2	0.0	-12.9	-4.9	na
Electricity	0.1	0.2	0.3	0.2	0.2	na	14.1	0.1	-0.7	-4.1	na
Heat	0.0	0.0	0.0	0.1	0.1	na	0.0	0.0	0.0	0.0	na
Biomass	0.4	0.4	0.4	0.3	0.3	na	0.0	0.0	-7.0	-6.4	na
CO2 Emissions in Mt of CO2											
Total	4.6	8.3	9.5	6.9	6.1	na	10.4	2.1	-7.5	-11.5	na
Excluding Bunkers and Air Transport	4.3	7.9	8.8	6.0	5.3	na	10.7	1.8	-9.1	-10.7	na
Indicators											
Population (Million)	2.4	2.7	3.0	3.3	3.3	3.3	2.1	2.1	1.9	1.5	1.2
GDP (Index 1985 = 100)	64	83.7	105.6	102.1	71.6	63.7	4.6	4.0	-0.8	-29.9	-11.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	622	903	737	538	677	526	6.4	-3.3	-7.6	25.9	-22.3
Gross Inl. Consumption/Capita (toe/inhabitant)	0.76	1.29	1.17	0.77	0.67	0.46	9.1	-1.5	-10.0	-13.1	-31.6
Electricity Generated/Capita (kWh/inhabitant)	804	1391	1285	981	848	811	9.6	-1.3	-6.5	-13.5	-4.4
CO2 Emissions/Capita (t of CO2/inhabitant)	1.81	2.95	2.90	1.84	1.62	na	8.4	-0.3	-10.8	-12.1	na
Import Dependency (%)	-50.1	0.1	-18.8	8.0	22.4	29.8	-	-	-	180.3	33.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass

BULGARIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	5.2	7.7	9.9	9.8	8.9	8.7	7.0	4.2	-0.1	-9.8	-1.8
Solids	4.2	5.2	6.0	5.4	4.7	5.0	3.5	2.5	-2.7	-12.6	7.3
Oil	0.1	0.3	0.1	0.1	0.1	0.1	11.3	-15.5	-12.1	-8.2	-8.3
Natural gas	0.1	0.1	0.0	0.0	0.0	0.0	1.2	-32.3	-8.1	-20.0	-50.0
Nuclear	0.2	1.6	3.1	3.8	3.4	3.0	37.1	11.8	5.0	-10.1	-13.9
Hydro	0.2	0.3	0.2	0.2	0.3	0.3	10.1	-7.5	-0.3	69.7	-3.9
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.2	0.2	0.4	0.4	0.3	0.3	-3.1	13.0	-3.5	-9.0	-1.3
Net Imports	16.3	21.0	22.2	17.0	13.9	9.7	4.3	0.9	-6.4	-18.5	-30.4
Solids	3.9	4.3	4.4	3.4	2.9	2.3	1.6	0.6	-6.6	-15.1	-19.2
Oil	11.9	13.4	12.6	8.5	6.4	2.9	2.0	-0.9	-9.6	-24.6	-54.7
Crude oil	*10.8*	*13.2*	*13.5*	*8.3*	*4.5*	*1.2*	*3.4*	*0.4*	*-11.5*	*-46.0*	*-74.2*
Oil products	*1.0*	*0.1*	*-0.9*	*0.1*	*1.9*	*1.7*	-27.7	-	-	-	*-8.3*
Natural gas	0.2	3.0	4.8	4.9	4.5	4.3	53.7	7.8	0.6	-8.4	-3.2
Electricity	0.3	0.3	0.3	0.3	0.2	0.1	-1.0	0.6	-1.1	-45.1	-20.9
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	21.6	28.7	31.9	27.5	23.0	18.4	4.9	1.8	-3.6	-16.4	-19.9
Solids	8.2	9.4	10.4	8.8	7.5	7.3	2.3	1.8	-4.1	-14.5	-2.7
Oil	12.0	13.7	12.8	9.1	6.6	3.0	2.2	-1.1	-8.1	-27.4	-54.3
Natural gas	0.4	3.2	4.6	4.9	4.5	4.4	43.4	6.3	1.5	-6.3	-3.1
Other *(1)*	1.0	2.5	4.1	4.7	4.3	3.6	16.0	8.9	3.5	-9.1	-14.6
Electricity Generation in TWh	22.8	34.8	41.8	42.1	40.4	36.9	7.3	3.1	0.2	-4.2	-8.6
Nuclear	0.9	6.2	12.1	14.7	13.2	11.4	37.1	11.8	5.0	-10.1	-13.9
Hydro	2.1	3.7	2.3	2.3	3.9	3.8	10.1	-7.5	-0.3	69.9	-3.9
Thermal	19.8	25.0	27.4	25.2	23.3	21.8	3.9	1.6	-2.1	-7.5	-6.3
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	5.8	9.3	10.5	7.9	9.2	na	8.4	1.9	-6.8	16.4	na
Solids	4.1	5.2	5.8	5.3	5.9	na	3.9	2.0	-2.2	11.6	na
Oil	1.6	4.2	3.9	0.6	0.8	na	16.9	-1.1	-36.9	35.3	na
Gas	0.0	0.0	0.8	2.0	2.3	na	0.0	0.0	26.1	17.1	na
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.0	0.0	0.0	0.0	0.1	na	0.0	0.0	0.0	0.0	na
Average Thermal Efficiency in %	29.6	23.0	22.5	27.4	21.8	na	-4.1	-0.3	5.1	-20.5	na
Non-Energy Uses	0.0	0.0	0.0	0.4	0.7	na	0.0	0.0	0.0	83.5	na
Total Final Energy Demand	16.2	20.1	19.0	20.7	13.7	na	3.7	-1.0	2.2	-33.8	na
Solids	3.8	3.6	4.0	3.4	1.6	na	-0.8	1.9	-4.3	-53.4	na
Oil	9.1	8.5	6.0	7.3	3.8	na	-1.0	-5.6	4.8	-48.0	na
Gas	0.4	3.2	3.8	2.3	1.7	na	43.4	3.0	-11.8	-27.0	na
Electricity	1.9	2.7	3.2	3.1	2.5	na	6.1	2.7	-0.9	-17.8	na
Heat	0.8	1.9	1.5	4.3	3.9	na	15.9	-3.8	29.9	-8.4	na
Biomass	0.2	0.2	0.4	0.4	0.2	na	-3.1	13.0	-3.5	-44.6	na
CO2 Emissions in Mt of CO2											
Total	65.0	81.6	80.8	69.3	54.0	na	3.9	-0.2	-3.8	-22.0	na
Excluding Bunkers and Air Transport	65.0	81.6	80.8	68.3	53.4	na	3.9	-0.2	-4.1	-21.8	na
Indicators											
Population (Million)	8.7	8.9	9.0	9.0	9.0	9.0	0.4	0.2	0.1	-0.1	0.0
GDP (Index 1985 = 100)	na	86.8	102.7	93.5	82.5	76.2	na	2.8	-2.3	-11.8	-7.7
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	797	750	710	673	584	na	-1.0	-1.4	-5.2	-13.2
Gross Inl. Consumption/Capita (toe/inhabitant)	2.49	3.24	3.56	3.06	2.56	2.05	4.5	1.6	-3.7	-16.3	-19.9
Electricity Generated/Capita (kWh/inhabitant)	2629	3931	4667	4688	4497	4112	6.9	2.9	0.1	-4.1	-8.6
CO2 Emissions/Capita (t of CO2/inhabitant)	7.49	9.21	9.02	7.60	5.95	na	3.5	-0.4	-4.2	-21.7	na
Import Dependency (%)	75.5	73.3	68.9	61.2	59.9	51.9	-0.5	-1.0	-2.9	-2.2	-13.3

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

FORMER CZECHOSLOVAKIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	44.0	48.9	52.5	45.4	41.9	37.5	1.8	1.2	-3.5	-7.6	-10.7
Solids	42.3	46.3	46.4	37.6	34.5	30.0	1.5	0.0	-5.2	-8.3	-13.0
Oil	0.2	0.1	0.1	0.1	0.1	0.1	-7.3	7.2	-4.2	13.8	0.0
Natural gas	0.7	0.5	0.6	0.5	0.5	0.5	-4.3	2.0	-1.1	-17.3	0.0
Nuclear	0.1	1.2	4.7	6.4	6.2	6.2	45.0	25.7	8.3	-3.2	0.0
Hydro	0.3	0.4	0.3	0.3	0.3	0.3	2.8	-2.9	0.0	-23.9	0.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.4	0.4	0.3	0.4	0.4	0.4	0.3	-4.0	6.6	4.3	-1.6
Net Imports	16.9	25.0	24.3	23.8	22.0	19.1	6.7	-0.4	-0.5	-7.8	-12.8
Solids	-0.7	-0.4	0.1	0.1	0.0	0.0	-8.5	-	-2.2	-89.4	-82.0
Oil	14.9	18.5	15.7	13.1	10.9	9.2	3.7	-2.7	-4.4	-16.9	-15.6
Crude oil	*14.6*	*18.8*	*16.2*	*13.3*	*11.1*	*9.4*	*4.4*	*-2.5*	*-4.8*	*-16.5*	*-15.6*
Oil products	*0.3*	*-0.4*	*-0.6*	*-0.3*	*-0.3*	*-0.2*	-	*7.2*	*-17.4*	*3.1*	*-15.6*
Natural gas	2.3	6.8	8.4	10.2	10.9	9.9	19.4	3.7	5.0	6.9	-9.9
Electricity	0.4	0.2	0.1	0.4	0.2	0.2	-13.7	-3.8	32.6	-60.3	22.3
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	60.9	73.6	77.5	69.9	64.0	56.7	3.2	0.8	-2.5	-8.5	-11.4
Solids	41.6	45.7	47.2	38.2	34.4	29.8	1.6	0.6	-5.2	-9.9	-13.5
Oil	15.0	18.5	15.8	13.4	11.5	9.7	3.6	-2.6	-4.0	-14.1	-15.5
Natural gas	3.0	7.3	9.0	10.8	11.0	9.9	16.0	3.6	4.6	2.0	-9.7
Other *(1)*	1.3	2.2	5.4	7.6	7.1	7.2	9.4	16.7	8.6	-6.7	2.6
Electricity Generation in TWh	56.0	72.7	84.8	86.6	83.3	na	4.4	2.6	0.5	-3.9	na
Nuclear	0.5	4.5	17.9	24.6	23.8	na	45.0	25.7	8.3	-3.2	na
Hydro	4.0	4.8	4.0	4.0	3.0	na	2.8	-2.9	0.0	-24.1	na
Thermal	51.5	63.4	62.9	58.0	56.4	na	3.5	-0.1	-2.0	-2.7	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	18.5	32.6	23.9	26.0	22.7	na	10.0	-5.1	2.2	-12.8	na
Solids	14.8	26.1	17.0	23.0	20.0	na	10.0	-7.0	7.9	-13.0	na
Oil	3.5	4.4	3.9	1.9	2.3	na	4.2	-1.9	-16.4	17.6	na
Gas	0.2	2.1	3.0	1.1	0.4	na	46.4	6.0	-22.0	-63.2	na
Geothermal	0	0	0	0	0	na	-	-	-	-	-
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	24.0	16.7	22.7	19.2	21.4	na	-5.8	5.2	-4.1	11.6	na
Non-Energy Uses	1.5	1.7	1.4	1.2	1.2	na	1.6	-2.8	-4.0	-3.7	na
Total Final Energy Demand	49.1	45.5	56.0	46.7	42.8	na	-1.3	3.5	-4.4	-8.4	na
Solids	22.8	15.6	23.8	10.7	11.1	na	-6.1	7.3	-18.2	4.3	na
Oil	8.8	11.2	10.1	8.3	6.8	na	4.1	-1.7	-4.9	-18.2	na
Gas	3.2	5.4	6.1	9.0	8.2	na	9.2	2.1	10.5	-9.2	na
Electricity	3.9	4.9	5.7	6.0	5.6	na	3.7	2.6	1.4	-7.0	na
Heat	10.0	8.1	10.0	12.3	10.6	na	-3.6	3.7	5.3	-13.5	na
Biomass	0.4	0.4	0.3	0.4	0.4	na	0.3	-4.0	6.6	4.3	na
CO2 Emissions in Mt of CO2											
Total	197.3	233.3	228.4	192.8	175.0	na	2.8	-0.4	-4.1	-9.3	na
Excluding Bunkers and Air Transport	196.2	231.4	227.1	191.7	174.0	na	2.8	-0.3	-4.1	-9.3	na
Indicators											
Population (Million)	14.7	15.3	15.5	15.7	15.6	15.5	0.7	0.2	0.2	-0.5	-0.5
GDP (Index 1985 = 100)	na	93.4	102.3	103.6	89.4	82.7	na	1.5	0.3	-13.7	-7.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	1422	1366	1218	1291	1236	na	-0.7	-2.8	6.0	-4.2
Gross Inl. Consumption/Capita (toe/inhabitant)	4.14	4.81	4.99	4.47	4.11	3.66	2.5	0.6	-2.7	-8.1	-11.0
Electricity Generated/Capita (kWh/inhabitant)	3814	4751	5459	5532	5345	na	3.7	2.3	0.3	-3.4	na
CO2 Emissions/Capita (t of CO2/inhabitant)	13.35	15.11	14.62	12.24	11.17	na	2.1	-0.6	-4.3	-8.8	na
Import Dependency (%)	27.8	33.9	31.4	34.1	34.3	33.8	3.4	-1.3	2.0	0.8	-1.6

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

HUNGARY: SUMMARY ENERGY BALANCE

Mtoe	1974	3,1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	13.3	15.0	16.7	14.7	14.5	13.6	2.0	1.9	-3.3	-1.2	-6.2
Solids	6.8	7.0	6.1	4.7	4.5	3.7	0.3	-2.2	-6.4	-3.6	-17.9
Oil	2.2	2.8	2.7	2.3	2.2	2.1	4.2	-0.2	-4.4	-3.8	-2.4
Natural gas	3.7	4.6	5.6	3.8	3.8	3.8	3.7	3.3	-9.0	1.0	-1.5
Nuclear	0.0	0.0	1.9	3.6	3.6	3.6	0.0	0.0	16.6	0.0	0.5
Hydro	0.0	0.0	0.0	0.0	0.0	0.0	21.0	-6.2	0.0	13.3	0.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.6	0.6	0.3	0.3	0.3	0.3	0.8	-9.2	-5.0	14.5	0.0
Net Imports	9.4	13.9	14.5	14.4	12.3	11.8	6.7	0.7	-0.2	-14.6	-4.2
Solids	1.7	2.0	2.6	1.5	2.0	2.8	3.1	4.7	-13.0	34.2	39.0
Oil	7.2	8.4	7.1	6.7	4.7	4.3	2.5	-2.7	-1.5	-30.6	-8.5
Crude oil	*6.6*	*7.4*	*6.7*	*6.3*	*5.2*	*4.7*	*2.0*	*-1.6*	*-1.7*	*-17.7*	*-8.3*
Oil products	*0.6*	*1.0*	*0.4*	*0.4*	*-0.5*	*-0.5*	*7.0*	*-14.3*	*2.5*	-	*-6.9*
Natural gas	0.1	2.9	3.8	5.2	5.0	4.6	66.6	4.7	7.8	-4.0	-7.7
Electricity	0.4	0.6	0.9	1.0	0.6	0.6	8.0	6.0	1.4	-33.8	-11.5
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	22.6	28.9	30.7	28.9	27.2	25.9	4.2	1.0	-1.5	-5.9	-5.0
Solids	8.7	9.2	8.6	6.8	6.5	6.2	0.9	-1.2	-5.7	-4.4	-3.7
Oil	9.1	11.3	9.5	8.4	7.4	6.9	3.7	-2.8	-3.1	-11.3	-6.9
Natural gas	3.8	7.2	9.4	8.9	8.8	8.4	11.0	4.5	-1.2	-1.4	-4.8
Other *(1)*	1.0	1.3	3.3	4.9	4.6	4.4	4.2	17.1	10.3	-6.9	-4.3
Electricity Generation in TWh	19.0	24.0	28.1	28.4	30.0	31.6	4.0	2.6	0.3	5.5	5.5
Nuclear	0.0	0.0	7.4	13.7	13.7	13.8	0.0	0.0	16.6	0.0	0.5
Hydro	0.1	0.3	0.2	0.2	0.2	0.2	21.1	-6.7	1.3	9.0	0.0
Thermal	18.9	23.8	20.5	14.5	16.1	17.6	3.9	-2.4	-8.3	10.7	9.8
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	6.7	7.1	6.6	5.5	5.6	na	1.0	-1.3	-4.5	3.0	na
Solids	3.6	3.5	3.2	3.0	2.8	na	-0.4	-1.8	-1.1	-8.0	na
Oil	2.2	1.2	1.1	0.6	1.0	na	-9.6	-0.8	-13.0	55.5	na
Gas	0.9	2.4	2.2	1.8	1.8	na	16.8	-1.1	-5.3	2.8	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.0	0.0	0.0	0	0	na	0.0	-33.9	-100.0	-	na
Average Thermal Efficiency in %	24.3	28.8	26.9	22.9	24.6	na	2.9	-1.2	-3.9	7.5	na
Non-Energy Uses	0.8	0.7	0.7	0.6	0.6	na	-0.2	-2.1	-0.3	-3.7	na
Total Final Energy Demand	18.1	22.4	22.7	20.0	18.9	na	3.6	0.3	-3.1	-5.8	na
Solids	3.7	4.6	4.8	3.0	2.9	na	3.6	0.8	-11.3	-1.9	na
Oil	5.8	8.0	6.6	6.1	5.3	na	5.5	-3.1	-2.1	-12.4	na
Gas	2.9	3.1	4.3	4.4	4.3	na	1.2	5.5	0.4	-2.2	na
Electricity	1.5	2.2	2.6	2.7	2.5	na	6.0	3.4	0.5	-6.1	na
Heat	3.6	4.0	4.0	3.6	3.5	na	1.7	0.2	-2.6	-2.6	na
Biomass	0.6	0.6	0.4	0.3	0.3	na	0.5	-6.9	-3.8	-3.8	na
CO2 Emissions in Mt of CO2											
Total	64.8	74.5	72.3	60.1	57.6	na	2.4	-0.5	-4.5	-4.1	na
Excluding Bunkers and Air Transport	64.8	74.5	71.8	59.5	57.2	na	2.4	-0.6	-4.6	-4.0	na
Indicators											
Population (Million)	10.5	10.7	10.5	10.4	10.4	10.3	0.4	-0.3	-0.4	-0.1	-0.3
GDP (Index 1985 = 100)	72.0	91.7	102.3	100.2	90.0	85.5	4.1	1.8	-0.5	-10.2	-5.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	1164	1170	1113	1069	1121	1120	0.1	-0.8	-1.0	4.8	0.0
Gross Inl. Consumption/Capita (toe/inhabitant)	2.16	2.70	2.92	2.79	2.63	2.51	3.8	1.3	-1.1	-5.8	-4.8
Electricity Generated/Capita (kWh/inhabitant)	1812	2243	2666	2742	2897	3065	3.6	2.9	0.7	5.6	5.8
CO2 Emissions/Capita (t of CO2/inhabitant)	6.18	6.96	6.82	5.75	5.52	na	2.0	-0.3	-4.2	-3.9	na
Import Dependency (%)	41.6	48.1	47.2	49.7	45.1	45.4	-	-	-	-9.3	0.9

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

POLAND: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	103.7	121.2	127.1	97.9	94.5	92.2	2.6	0.8	-6.3	-3.5	-2.4
Solids	98.4	115.1	120.9	94.5	90.7	88.6	2.6	0.8	-6.0	-4.0	-2.3
Oil	0.6	0.3	0.2	0.2	0.2	0.2	-8.2	-11.0	1.3	-1.1	0.0
Natural gas	4.1	5.0	4.7	2.4	2.6	2.4	3.4	-1.0	-15.9	11.8	-7.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.2	0.3	0.3	0.3	0.3	0.3	5.0	2.5	-3.4	2.8	3.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.4	0.4	1.0	0.6	0.7	0.7	1.0	15.2	-11.2	6.2	-4.9
Net Imports	-11.6	4.5	2.9	2.2	3.6	4.3	-	-7.3	-6.1	61.4	18.0
Solids	-24.8	-18.2	-19.7	-18.9	-14.3	-15.8	-5.0	1.3	-1.0	-24.4	10.8
Oil	12.0	18.9	17.4	14.5	12.9	14.3	7.8	-1.4	-4.4	-11.5	11.5
Crude oil	*10.8*	*16.6*	*14.1*	*13.1*	*11.5*	*13.0*	*7.5*	*-2.8*	*-1.7*	*-12.0*	*12.3*
Oil products	*1.3*	*2.3*	*3.3*	*1.4*	*1.3*	*1.4*	*10.4*	*6.4*	*-19.3*	*-7.0*	*4.1*
Natural gas	1.5	3.9	5.2	6.7	5.3	5.8	17.7	4.9	6.7	-21.5	10.5
Electricity	-0.2	0.0	0.0	-0.1	-0.2	-0.1	-33.8	-	-	152.8	-71.3
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	94.7	124.9	129.5	98.5	97.1	95.1	4.7	0.6	-6.6	-1.5	-2.0
Solids	76.5	97.6	101.5	75.4	75.2	71.6	4.1	0.7	-7.2	-0.3	-4.7
Oil	12.3	17.9	16.8	13.5	13.3	13.8	6.4	-1.0	-5.4	-1.2	4.0
Natural gas	5.5	8.8	9.8	8.8	7.9	8.3	8.0	1.9	-2.6	-11.1	5.0
Other *(1)*	0.4	0.7	1.4	0.8	0.8	1.4	10.3	11.7	-11.4	-10.4	85.1
Electricity Generation in TWh	91.6	121.9	140.3	136.3	134.7	132.7	4.9	2.4	-0.7	-1.2	-1.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	2.5	3.3	3.8	3.3	3.4	3.5	4.9	2.5	-3.4	2.9	3.0
Thermal	89.1	118.6	136.5	133.0	131.3	129.2	4.9	2.4	-0.7	-1.3	-1.6
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	28.3	36.1	42.4	42.9	42.4	na	4.1	2.7	0.3	-1.3	na
Solids	26.0	35.6	41.7	41.7	41.2	na	5.3	2.7	0.0	-1.2	na
Oil	1.4	0.5	0.6	1.2	1.1	na	-16.1	3.7	18.2	-7.2	na
Gas	0.8	0.0	0.0	0.0	0.1	na	-39.9	-7.8	3.0	103.7	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	27.1	28.3	27.7	26.6	26.6	na	0.7	-0.3	-1.0	0.0	na
Non-Energy Uses	1.4	1.9	2.0	4.3	3.4	na	4.9	0.5	21.3	-19.6	na
Total Final Energy Demand	65.2	84.6	84.7	61.9	61.0	na	4.4	0.0	-7.5	-1.6	na
Solids	31.3	36.7	34.3	21.0	21.5	na	2.7	-1.1	-11.6	2.4	na
Oil	8.3	11.4	10.9	9.3	9.5	na	5.4	-0.7	-3.8	1.8	na
Gas	4.6	7.5	8.4	5.9	5.3	na	8.4	1.9	-8.4	-10.4	na
Electricity	5.6	7.6	8.5	8.3	7.7	na	5.2	2.0	-0.7	-7.1	na
Heat	15.0	21.1	21.5	16.8	16.3	na	5.8	0.3	-6.0	-3.0	na
Biomass	0.4	0.4	1.0	0.6	0.7	na	1.0	15.2	-11.2	6.2	na
CO2 Emissions in Mt of CO2											
Total	275.6	347.4	362.3	300.3	298.1	na	3.9	0.7	-4.6	-0.7	na
Excluding Bunkers and Air Transport	274.8	346.4	361.2	299.7	297.3	na	3.9	0.7	-4.6	-0.8	na
Indicators											
Population (Million)	33.7	35.6	37.5	38.1	38.2	38.4	0.9	0.9	0.4	0.3	0.3
GDP (Index 1985 = 100)	na	94.6	103.2	89.9	83.1	84.1	na	1.5	-3.4	-7.6	1.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	1420	1348	1177	1256	1216	na	-0.9	-3.3	6.6	-3.2
Gross Inl. Consumption/Capita (toe/inhabitant)	2.81	3.51	3.46	2.58	2.54	2.48	3.8	-0.3	-7.0	-1.8	-2.3
Electricity Generated/Capita (kWh/inhabitant)	2719	3425	3746	3576	3523	3459	3.9	1.5	-1.2	-1.5	-1.8
CO2 Emissions/Capita (t of CO2/inhabitant)	8.16	9.74	9.64	7.86	7.77	na	3.0	-0.2	-5.0	-1.1	na
Import Dependency (%)	-12.1	3.6	2.2	2.3	3.7	4.5	-	-	-	64.2	20.4

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

ROMANIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	47.5	52.8	54.3	39.1	33.0	31.9	1.8	0.4	-7.9	-15.5	-3.5
Solids	6.4	8.1	10.5	7.6	6.4	7.5	3.9	4.4	-7.8	-14.9	16.0
Oil	14.1	11.2	9.8	7.7	6.6	6.3	-3.8	-2.1	-5.9	-14.4	-4.0
Natural gas	25.1	31.3	31.7	21.9	17.8	15.8	3.7	0.2	-8.9	-18.7	-11.0
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.7	1.2	1.0	1.0	1.3	1.2	8.7	-2.7	-1.0	27.9	-1.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	1.2	1.1	1.2	1.0	1.0	1.0	-2.3	2.4	-5.6	-0.8	3.9
Net Imports	-0.1	11.9	13.5	21.5	14.4	13.3	-	2.2	12.3	-33.1	-7.5
Solids	2.4	4.0	5.0	4.3	2.7	2.9	9.1	3.5	-3.6	-37.2	7.1
Oil	-2.1	6.7	5.8	10.6	7.2	6.3	-	-2.4	16.4	-31.5	-13.1
Crude oil	*4.4*	*15.5*	*16.5*	*15.6*	*8.2*	*7.1*	*23.3*	*1.1*	*-1.5*	*-47.7*	*-13.0*
Oil products	*-6.5*	*-8.8*	*-10.8*	*-5.0*	*-0.9*	*-0.8*	*5.3*	*3.4*	*-17.4*	*-81.8*	*-11.8*
Natural gas	-0.2	1.1	2.4	5.8	3.8	3.5	-	13.6	25.0	-34.2	-8.3
Electricity	-0.2	0.0	0.4	0.8	0.6	0.6	-	47.5	20.9	-25.6	-0.8
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	47.4	64.7	66.1	60.3	48.4	45.9	5.3	0.4	-2.3	-19.8	-5.2
Solids	8.7	12.1	15.4	11.7	9.4	10.6	5.6	4.1	-6.7	-19.9	12.9
Oil	12.0	17.9	15.6	18.2	14.6	13.2	6.9	-2.2	4.0	-19.7	-9.5
Natural gas	24.9	32.4	32.5	27.7	21.6	19.3	4.5	0.1	-3.9	-21.9	-10.6
Other *(1)*	1.8	2.3	2.6	2.8	2.8	2.8	4.7	2.2	1.3	2.1	-0.6
Electricity Generation in TWh	49.1	68.9	76.6	64.7	57.2	54.0	5.8	1.8	-4.1	-11.7	-5.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	8.5	14.0	11.9	11.4	14.6	14.4	8.7	-2.7	-1.0	27.8	-1.0
Thermal	40.6	54.8	64.7	53.3	42.6	39.6	5.1	2.8	-4.7	-20.2	-7.0
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	17.1	14.4	19.7	20.6	18.4	na	-2.9	5.4	1.1	-10.9	na
Solids	4.5	5.5	5.5	5.7	5.8	na	3.4	0.0	0.8	0.7	na
Oil	2.4	2.6	3.9	6.2	4.6	na	1.3	6.8	12.7	-26.8	na
Gas	10.2	6.1	10.2	8.6	8.0	na	-8.2	8.9	-4.2	-7.1	na
Geothermal	0	0	0	0	0	na	-	-	-	-	-
Biomass	0.0	0.1	0.1	0.0	0.0	na	0.0	-3.9	-20.6	-18.9	na
Average Thermal Efficiency in %	20.4	32.8	28.2	22.3	19.9	na	8.3	-2.5	-5.7	-10.4	na
Non-Energy Uses	1.1	0.9	2.0	1.1	1.3	na	-3.2	13.8	-14.0	17.5	na
Total Final Energy Demand	34.2	55.0	49.8	41.6	32.9	na	8.2	-1.6	-4.4	-21.1	na
Solids	4.1	6.1	6.9	2.8	2.1	na	6.7	2.2	-20.5	-25.6	na
Oil	7.9	12.3	8.6	8.0	7.6	na	7.7	-5.8	-1.7	-5.4	na
Gas	14.3	26.3	22.3	19.0	13.6	na	10.6	-2.7	-3.8	-28.7	na
Electricity	3.1	4.6	5.4	4.7	3.9	na	7.1	2.6	-3.7	-16.5	na
Heat	3.6	4.7	5.4	6.2	4.8	na	4.7	2.4	3.1	-22.5	na
Biomass	1.2	1.0	1.1	0.9	0.9	na	-4.1	3.0	-4.6	-0.1	na
CO2 Emissions in Mt of CO2											
Total	128.2	173.1	169.1	148.2	123.2	na	5.1	-0.4	-3.3	-16.9	na
Excluding Bunkers and Air Transport	127.6	172.4	168.7	147.4	122.6	na	5.1	-0.4	-3.3	-16.8	na
Indicators											
Population (Million)	21.0	22.2	22.8	23.2	23.2	22.8	0.9	0.5	0.4	-0.1	-1.9
GDP (Index 1985 = 100)	na	85.6	102.8	89.6	77.3	65.4	na	3.1	-3.4	-13.7	-15.4
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	1209	1029	1078	1002	1123	na	-2.7	1.2	-7.0	12.1
Gross Inl. Consumption/Capita (toe/inhabitant	2.25	2.91	2.90	2.60	2.09	2.02	4.4	-0.1	-2.7	-19.7	-3.3
Electricity Generated/Capita (kWh/inhabitant)	2333	3102	3355	2789	2465	2374	4.9	1.3	-4.5	-11.6	-3.7
CO2 Emissions/Capita (t of CO2/inhabitant)	6.07	7.77	7.39	6.35	5.29	na	4.2	-0.8	-3.7	-16.7	na
Import Dependency (%)	-0.1	18.3	20.4	35.6	29.6	28.9	-	-	-	-16.7	-2.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

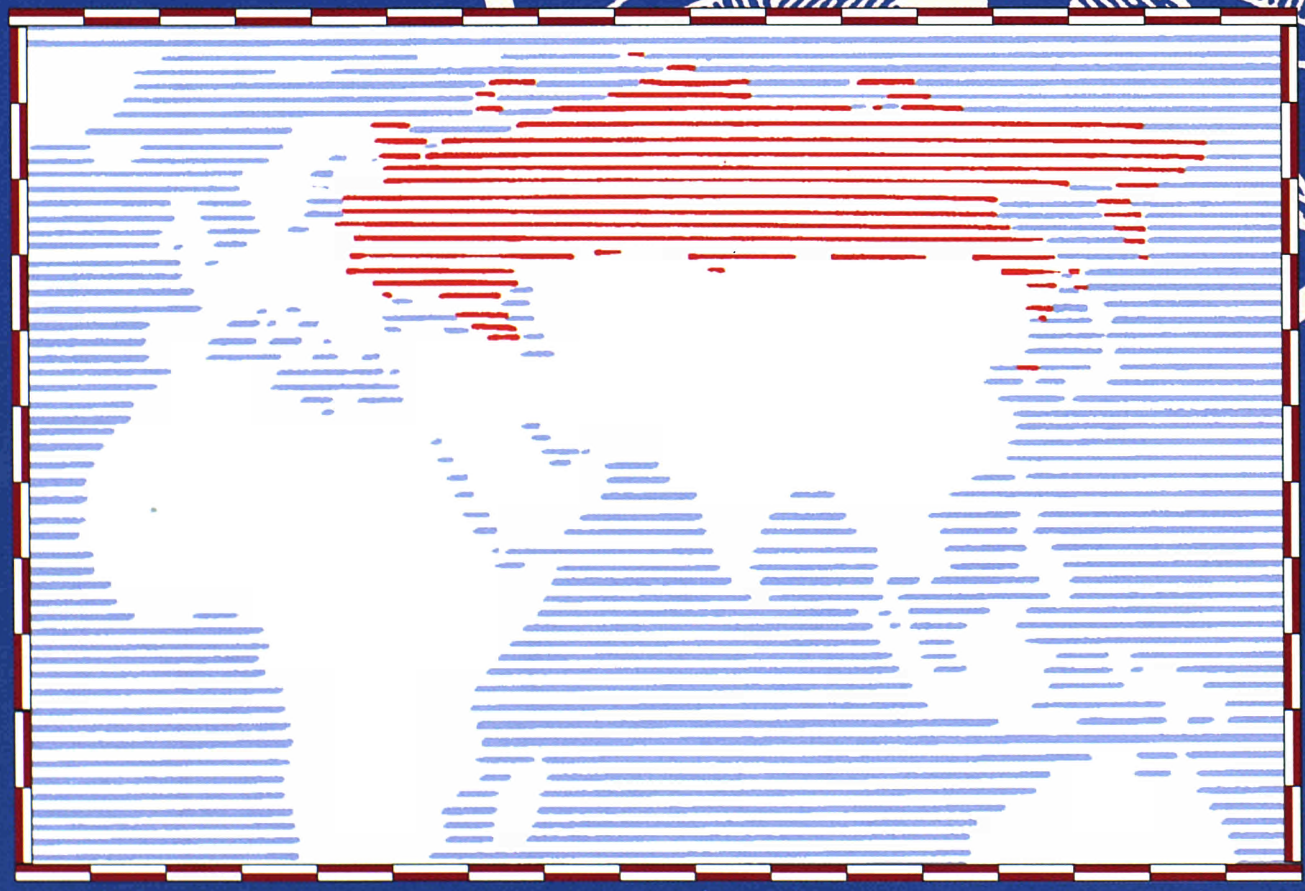
FORMER YUGOSLAVIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	15.5	18.8	26.4	25.4	23.4	22.1	3.2	5.8	-0.9	-8.0	-5.6
Solids	7.9	9.6	15.7	16.2	15.2	14.2	3.3	8.5	0.8	-6.2	-6.4
Oil	3.5	4.3	4.2	3.2	2.2	2.2	3.4	-0.3	-6.7	-31.3	0.0
Natural gas	1.4	1.7	2.0	2.2	1.5	1.5	3.2	2.4	1.9	-29.3	0.0
Nuclear	0.0	0.0	1.0	1.2	1.3	1.3	0.0	0.0	3.6	7.2	2.9
Hydro	1.8	2.4	2.4	1.7	2.2	1.8	5.3	-0.4	-7.9	29.4	-17.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.9	0.7	1.0	0.9	1.0	1.0	-3.3	5.9	-1.7	1.2	0.0
Net Imports	10.3	15.3	17.5	18.3	12.2	11.0	6.9	2.3	1.0	-33.3	-9.5
Solids	1.7	2.3	3.4	2.4	1.7	-1.3	5.2	6.4	-8.5	-27.6	-
Oil	8.5	11.8	11.0	12.8	8.3	8.8	5.5	-1.2	4.0	-34.8	5.9
Crude oil	*7.6*	*11.2*	*10.7*	*12.2*	*8.1*	*8.6*	*6.7*	*-0.8*	*3.5*	*-33.8*	*6.1*
Oil products	*1.0*	*0.6*	*0.3*	*0.6*	*0.2*	*0.2*	*-7.6*	*-10.8*	*16.4*	*-58.9*	*0.0*
Natural gas	0.0	1.2	3.1	3.1	2.1	1.7	0.0	17.0	-0.1	-31.7	-19.5
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	25.8	34.1	43.6	43.8	35.8	33.1	4.8	4.2	0.1	-18.3	-7.6
Solids	9.6	12.0	19.1	18.6	17.1	13.0	3.7	8.1	-0.7	-8.1	-24.1
Oil	12.1	16.1	14.9	16.1	10.6	11.0	4.9	-1.3	2.1	-34.1	3.8
Natural gas	1.4	3.0	5.1	5.3	3.7	3.2	12.8	9.6	0.7	-30.8	-11.4
Other *(1)*	2.7	3.1	4.5	3.8	4.5	5.9	2.6	6.2	-3.8	16.5	31.6
Electricity Generation in TWh	39.5	59.7	77.9	82.9	78.9	70.5	7.2	4.5	1.6	-4.8	-10.6
Nuclear	0.0	0.0	4.0	4.6	5.0	5.1	0.0	0.0	3.6	7.1	2.9
Hydro	20.7	28.2	27.5	19.8	25.6	21.1	5.3	-0.4	-7.9	29.4	-17.6
Thermal	18.8	31.6	46.4	58.5	48.3	44.3	9.0	6.6	6.0	-17.4	-8.2
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	4.9	8.9	15.9	18.1	15.4	na	10.5	10.2	3.3	-15.1	na
Solids	4.2	7.2	12.9	13.6	13.0	na	9.3	10.1	1.3	-4.5	na
Oil	0.5	1.3	2.3	3.7	1.9	na	19.5	9.4	12.2	-47.4	na
Gas	0.2	0.3	0.7	0.9	0.5	na	9.7	14.1	5.2	-43.7	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	33.2	30.5	25.1	27.7	27.0	na	-1.4	-3.2	2.6	-2.7	na
Non-Energy Uses	0.7	1.2	1.1	1.6	1.1	na	8.2	-1.6	10.9	-32.1	na
Total Final Energy Demand	19.0	19.8	25.0	22.5	17.6	na	0.7	4.0	-2.7	-21.7	na
Solids	4.7	2.6	3.8	2.9	1.9	na	-9.3	6.3	-6.1	-34.3	na
Oil	9.5	10.1	10.1	9.1	6.4	na	1.1	-0.2	-2.4	-30.3	na
Gas	1.1	2.1	3.1	2.5	1.9	na	11.9	6.5	-5.0	-26.7	na
Electricity	2.8	4.2	5.5	5.6	5.3	na	7.1	4.4	0.4	-4.5	na
Heat	0.0	0.0	1.6	1.4	1.2	na	0.0	0.0	-4.3	-14.0	na
Biomass	0.9	0.7	1.0	0.9	1.0	na	-3.3	5.9	-1.7	1.2	na
CO2 Emissions in Mt of CO2											
Total	70.3	81.8	118.8	115.7	91.9	na	2.6	6.4	-0.7	-20.6	na
Excluding Bunkers and Air Transport	69.3	80.8	117.6	114.5	90.9	na	2.6	6.5	-0.7	-20.6	na
Indicators											
Population (Million)	21.2	22.3	23.3	23.8	23.9	23.8	0.9	0.7	0.6	0.5	-0.4
GDP (Index 1985 = 100)	72.5	98.2	103.6	94.6	80.7	65.5	5.2	0.9	-2.2	-14.7	-18.8
Gross Inl. Consumption/GDP (toe/1985 MECU)	613	599	725	799	765	871	-0.4	3.3	2.4	-4.2	13.8
Gross Inl. Consumption/Capita (toe/inhabitant)	1.22	1.53	1.87	1.84	1.50	1.39	3.8	3.4	-0.4	-18.6	-7.2
Electricity Generated/Capita (kWh/inhabitant)	1865	2677	3348	3480	3296	2960	6.2	3.8	1.0	-5.3	-10.2
CO2 Emissions/Capita (t of CO2/inhabitant)	3.28	3.62	5.05	4.81	3.80	na	1.7	5.7	-1.3	-20.9	na
Import Dependency (%)	39.7	44.8	40.2	41.6	34.0	33.3	-	-	-	-18.4	-2.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PART IV

FORMER USSR



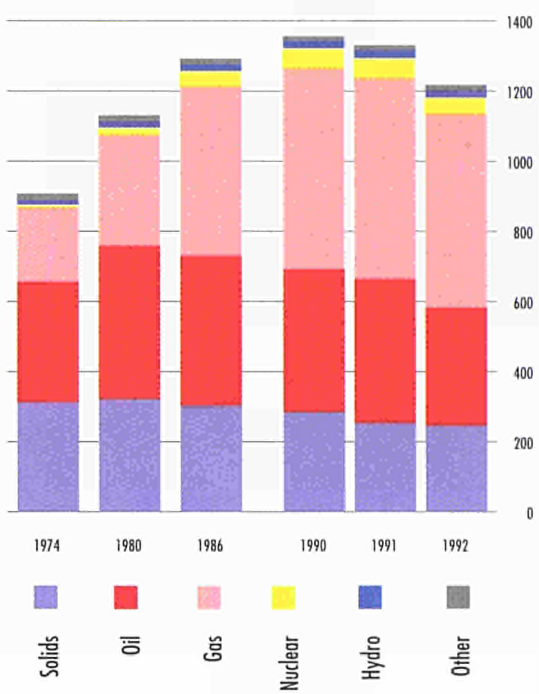
FORMER USSR

The former USSR includes the following fifteen Republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Energy and macroeconomic data for all these Republics are sometimes of doubtful quality, and we recommend references to trends rather than absolute values for analytical purposes. Moreover, with all the rapid changes in political, social and economic structures, data for 1992 are only estimates as statistics are at the moment not yet available.

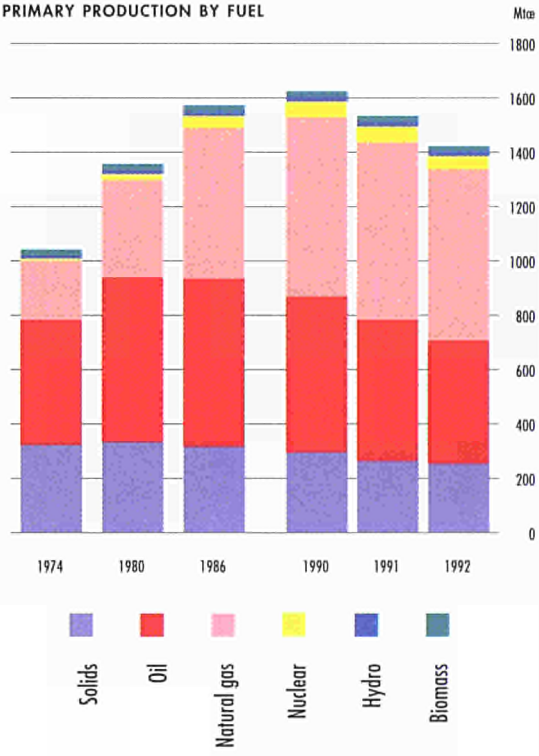
The former USSR is the second biggest energy producer in the world after the United States and the world's leading producer and exporter of natural gas. Since 1990, with the introduction of political and economic reforms, the economic situation is characterised by a serious crisis; in 1992, the level of GDP was comparable to that of 1980, while total population had increased 10% since then. Gross inland energy consumption after a peak of 1357 Mtoe in 1990 fell steadily to 1992 (1219 Mtoe), or 5.2% per year drop. The reduction however was not the same for all primary fuels. While solids and oil demand peaked in 1980 and since then decreased by about 2.2% per year, natural gas consumption has steadily increased in the period to 1991 (6% per year on average) and only dropped in 1992. Nuclear energy had a significant increase up to 1986, stagnated until 1991 and fell 18% in 1992.

The former USSR produces all forms of primary fossil fuels. For solid fuels, this region is the second largest in the world after the United States. Solid fuels output peaked in 1980 and since then their production shows a downward trend of about 2% per year. Crude oil production had its maximum in 1986 (618 Mtoe) and has decreased since then (5.1% per year) with a faster drop in 1992. Production of natural gas increased steadily until 1990 but decreased in 1991 (0.7%) and 1992 (-3.6%). By the late 1980s, production of natural gas outstripped those of solids or crude oil. The shares of primary fuels in 1992 production were: natural gas with 44%; oil with 32%; solids with 18%; nuclear at 3%; and renewable energy sources with 3%.

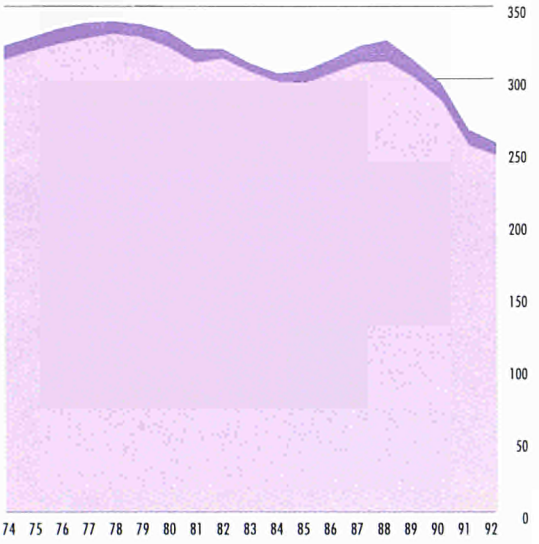
PRIMARY ENERGY DEMAND BY FUEL



PRIMARY PRODUCTION BY FUEL

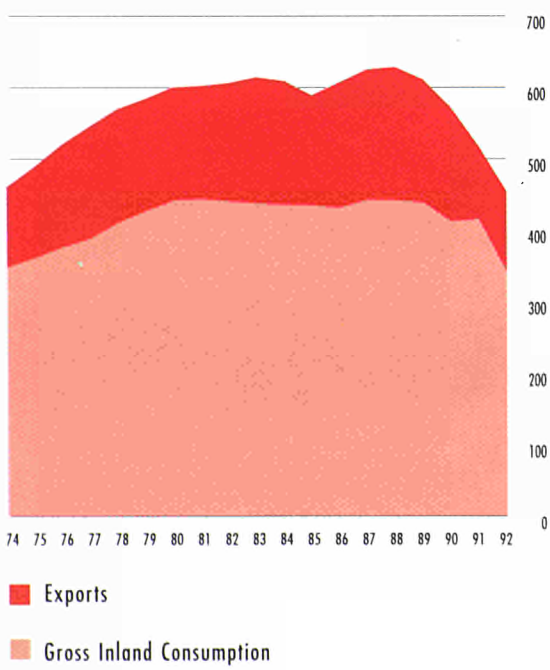


SOLIDS FUELS PRODUCTION IN THE FORMER USSR

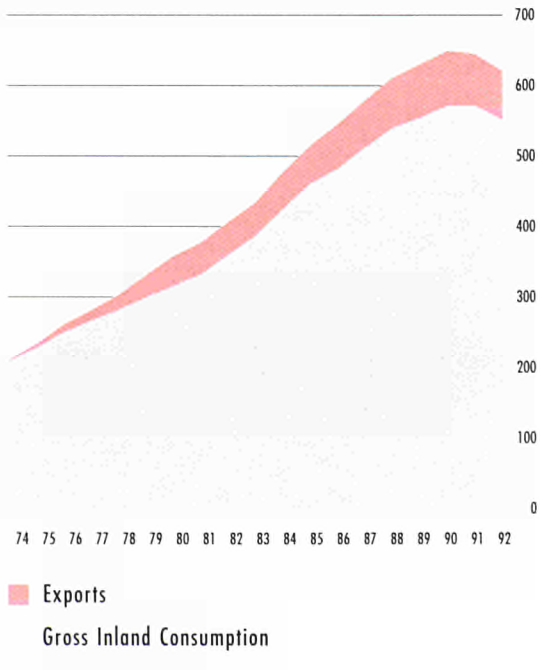


Exports of energy have always been important for the economy of the former USSR, as they constitute a source of hard currency (these earnings come mainly from exports to Western Europe). Total exported volumes increased until 1990 (double those of 1974). In 1991 they dropped 25% but there was a slight recovery in 1992 of 2%. However, this evolution is mainly due to exports of oil, which dropped 36% in 1991 and recovered 11% in 1992. Exports of natural gas also peaked in 1990 (78· Mtoe) and then decreased by about 5% per year. The volume of solid fuels exports has remained stable at around 10 Mtoe. Although at a very small level, electricity exports dropped by 44% and 56% in 1991 and 1992 respectively. Most of the reductions in natural gas exports were due to less demand in Central and Eastern European countries.

OIL PRODUCTION IN THE FORMER USSR



NATURAL GAS PRODUCTION IN THE FORMER USSR



FORMER USSR: TOTAL ENERGY (MTOE)

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Total Production	1042.6	1357.5	1574.1	1625.0	1534.4	1423.2	4.5	2.5	0.8	-5.6	-7.3
Armenia	na	na	1.2	0.8	1.4	1.4	na	na	-9.1	77.2	-0.4
Azerbaijan	na	na	24.4	19.9	18.7	17.5	na	na	-	-	-6.5
Belarus	na	na	2.2	2.2	2.2	2.1	na	na	-	-	-2.6
Estonia	0	0	0	0	0	0	-	-	-	-	-
Georgia	na	na	1.5	1.6	1.6	2.1	na	na	2.0	2.7	28.0
Kazakhstan	na	na	87.3	87.1	88.7	91.5	na	na	-0.1	1.9	3.2
Kyrgyzstan	na	na	2.6	2.7	2.5	1.2	na	na	1.6	-8.2	-50.6
Latvia	na	na	0.3	0.4	0.4	0.4	na	na	-	-	-4.9
Lithuania	na	na	2.1	4.5	4.5	4.5	na	na	-	-	0.8
Moldova	0	0	0	0	0	0	-	-	-	-	-
Russia	na	na	1207.5	1269.8	1196.9	1097.4	na	na	1.3	-5.7	-8.3
Tajikistan	na	na	2.5	2.1	1.7	1.8	na	na	-4.7	-16.9	1.9
Turkmenistan	na	na	74.6	76.9	73.7	54.0	na	na	0.8	-4.2	-26.7
Ukraine	na	na	131.7	117.7	101.9	109.4	na	na	-2.8	-13.4	7.3
Uzbekistan	na	na	36.4	39.4	40.2	39.9	na	na	2.0	2.2	-0.9
Total Net Imports	-125.2	-212.2	-249.9	-250.6	-188.5	-192.3	9.2	2.8	0.1	-24.8	2.0
Armenia	na	na	6	7	7	na	na	na	3.8	-0.5	na
Azerbaijan	na	na	-3	4	2	na	na	na	-	-55.0	na
Belarus	na	na	38	40	40	na	na	na	1.1	0.7	na
Estonia	na	na	8	6	6	na	na	na	-7.4	-8.8	na
Georgia	na	na	11.3	13.8	9.1	na	na	na	5.1	-33.9	na
Kazakhstan	na	na	-14.7	-12.1	-13.0	na	na	na	-4.7	7.1	na
Kyrgyzstan	na	na	5.1	6.2	6.3	na	na	na	5.0	2.2	na
Latvia	na	na	9	8	7	na	na	na	-3.8	-4.8	na
Lithuania	na	na	10	7	6	na	na	na	-6.3	-12.6	na
Moldova	na	na	9	9	8	na	na	na	0.6	-8.0	na
Russia	na	na	-363.9	-400.7	-337.5	na	na	na	2.4	-15.8	na
Tajikistan	na	na	4.5	5.4	6.2	na	na	na	4.7	14.6	na
Turkmenistan	na	na	-61.5	-62.8	-60.4	na	na	na	0.5	-3.7	na
Ukraine	na	na	86.3	109.8	126.7	na	na	na	6.2	15.5	na
Uzbekistan	na	na	6.2	9.5	-2.0	na	na	na	11.4	-	na
Total Gross Inland Consumption	908.4	1131.6	1294.4	1357.4	1332.9	1219.4	3.7	2.3	1.2	-1.8	-8.5
Armenia	na	na	7	8	8	na	na	na	2.0	7.4	na
Azerbaijan	na	na	22	23	20	na	na	na	1.9	-13.5	na
Belarus	na	na	40	42	42	na	na	na	1.0	0.7	na
Estonia	na	na	8	6	6	na	na	na	-7.4	-8.8	na
Georgia	na	na	12.8	15.4	10.7	na	na	na	4.7	-30.1	na
Kazakhstan	na	na	72.6	75.0	75.7	na	na	na	0.8	1.0	na
Kyrgyzstan	na	na	7.7	8.9	8.8	na	na	na	3.9	-1.0	na
Latvia	na	na	9	8	8	na	na	na	-3.3	-4.7	na
Lithuania	na	na	12	12	11	na	na	na	0.4	-7.9	na
Moldova	na	na	9	9	8	na	na	na	0.5	-8.0	na
Russia	na	na	813.7	852.1	846.3	na	na	na	1.2	-0.7	na
Tajikistan	na	na	7.0	7.5	7.9	na	na	na	1.6	5.9	na
Turkmenistan	na	na	13.0	14.2	13.3	na	na	na	2.1	-6.4	na
Ukraine	na	na	218.0	227.4	228.7	na	na	na	1.1	0.5	na
Uzbekistan	na	na	42.6	48.9	38.2	na	na	na	3.5	-21.9	na

FORMER USSR: SOLID FUELS (Mtoe)

Production	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Total Production	324.1	333.8	318.4	297.0	265.8	255.6	0.5	-0.8	-1.7	-10.5	-3.8
Armenia	0	0	0	0	0	0	-	-	-	-	-
Azerbaijan	0	0	0	0	0	0	-	-	-	-	-
Belarus	0	0	0	0	0	0	-	-	-	-	-
Estonia	0	0	0	0	0	0	-	-	-	-	-
Georgia	na	0.8	0.7	0.4	0.4	0.4	na	-1.8	-12.5	0.0	-0.1
Kazakhstan	na	48.8	58.3	55.5	57.5	56.2	na	3.0	-1.2	3.7	-2.3
Kyrgyzstan	na	1.7	1.7	1.7	1.4	1.1	na	-0.2	0.0	-19.7	-20.0
Latvia	0	0	0	0	0	0	-	-	-	-	-
Lithuania	0	0	0	0	0	0	-	-	-	-	-
Moldova	0	0	0	0	0	0	-	-	-	-	-
Russia	na	195.5	172.6	166.9	135.5	127.7	na	-2.1	-0.8	-18.8	-5.7
Tajikistan	na	1.0	0.8	0.3	0.1	0.1	na	-2.7	-23.1	-57.1	-5.3
Turkmenistan	0	0	0	0	0	0	-	-	-	-	-
Ukraine	na	83.4	81.7	69.7	68.4	67.6	na	-0.3	-3.9	-1.9	-1.2
Uzbekistan	na	2.5	2.5	2.5	2.5	2.5	na	0.0	0.0	-1.7	-0.9
Total Net Imports	-10.4	-11.1	-10.2	-11.7	-11.4	-8.9	1.0	-1.4	3.6	-2.4	-21.9
Total Gross Inland Consumption	312.8	321.9	304.0	285.3	254.3	246.7	0.5	-0.9	-1.6	-10.8	-3.0

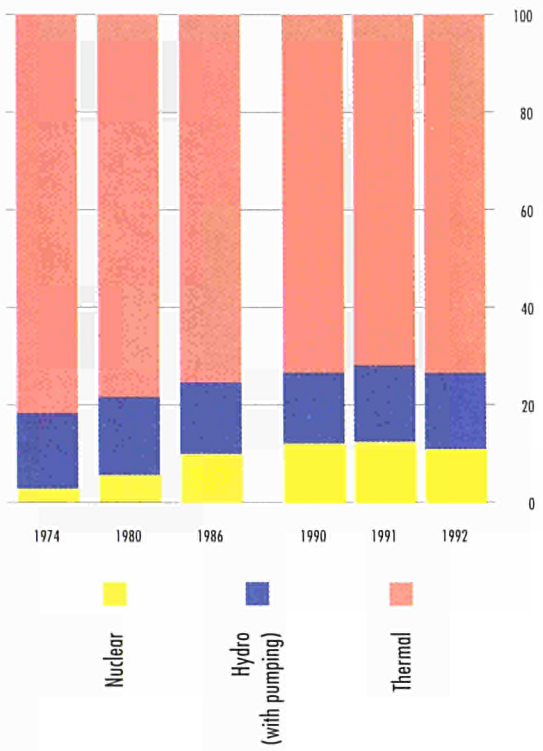
FORMER USSR: OIL (Mtoe)

Production	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Total Production	461.2	606.2	617.8	573.5	517.7	451.7	4.7	0.3	-1.8	-9.7	-12.8
Armenia	0	0	0	0	0	0	-	-	-	-	-
Azerbaijan	na	15.4	13.9	12.6	11.8	11.2	na	-1.7	-2.4	-6.3	-5.1
Belarus	na	2.6	2.0	2.1	2.1	2.0	na	-4.3	1.2	0.0	-4.8
Estonia	0	0	0	0	0	0	-	-	-	-	-
Georgia	na	0.2	0.2	0.2	0.2	0.2	na	0.0	0.0	0.0	0.0
Kazakhstan	na	19.4	24.6	25.3	26.8	27.7	na	4.0	0.7	5.9	3.4
Kyrgyzstan	na	0.2	0.2	0.2	0.1	0.1	na	0.0	0.0	-50.0	-20.0
Latvia	0	0	0	0	0	0	-	-	-	-	-
Lithuania	0	0	0	0	0	0	-	-	-	-	-
Moldova	0	0	0	0	0	0	-	-	-	-	-
Russia	na	550.6	562.7	519.0	463.5	397.8	na	0.4	-2.0	-10.7	-14.2
Tajikistan	na	0.5	0.4	0.2	0.1	0.1	na	-3.7	-15.9	-50.0	-10.0
Turkmenistan	na	7.9	5.9	5.8	5.4	5.4	na	-4.7	-0.4	-6.9	0.0
Ukraine	na	7.4	5.6	5.3	4.9	4.4	na	-4.5	-1.4	-7.5	-10.2
Uzbekistan	na	2.1	2.3	2.8	2.8	2.8	na	1.5	5.0	0.0	-0.4
Total Net Imports	-112.0	-156.9	-173.6	-158.1	-101.1	-112.2	5.8	1.7	-2.3	-36.0	10.9
Total Gross Inland Consumption	344.5	437.5	427.7	408.5	412.2	336.7	4.1	-0.4	-1.1	0.9	-18.3

FORMER USSR: NATURAL GAS (Mtoe)

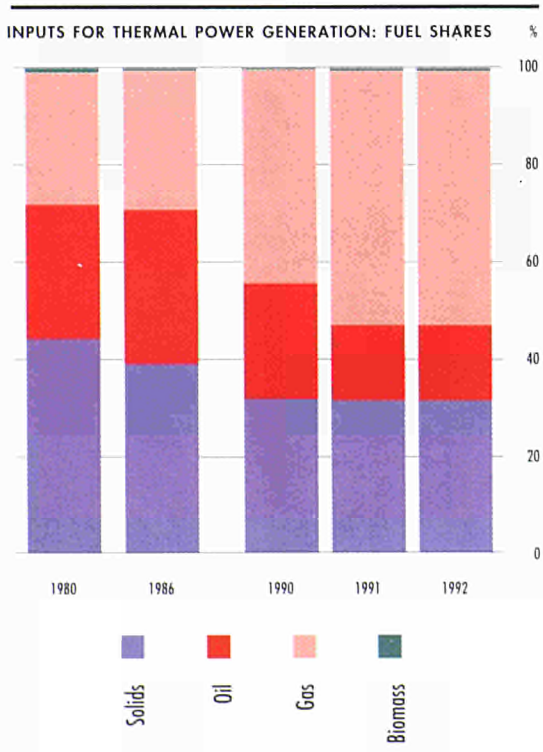
Production	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Total Production	215.5	359.6	554.8	659.9	655.2	631.5	8.9	7.5	4.4	-0.7	-3.6
Armenia	0	0	0	0	0	0	-	-	-	-	-
Azerbaijan	na	11.3	11.0	7.3	6.9	6.2	na	-0.5	-9.8	-5.4	-9.3
Belarus	na	0.2	0.2	0.2	0.2	0.1	na	0.0	-6.1	0.0	-33.3
Estonia	0	0	0	0	0	0	-	-	-	-	-
Georgia	na	0.0	0.0	0.0	0.0	0.0	na	2.1	9.6	0.0	0.0
Kazakhstan	na	3.5	4.7	5.7	6.4	7.1	na	5.1	5.1	11.3	11.4
Kyrgyzstan	na	0.1	0.1	0.1	0.1	0.1	na	-0.8	-1.5	0.0	-1.2
Latvia	0	0	0	0	0	0	-	-	-	-	-
Lithuania	0	0	0	0	0	0	-	-	-	-	-
Moldova	0	0	0	0	0	0	-	-	-	-	-
Russia	na	211.3	406.7	518.9	519.1	517.1	na	11.5	6.3	0.0	-0.4
Tajikistan	na	0.3	0.2	0.2	0.1	0.1	na	-3.9	-9.0	-50.0	-38.3
Turkmenistan	na	57.0	68.5	71.0	68.2	48.6	na	3.1	0.9	-4.0	-28.7
Ukraine	na	45.9	32.1	23.5	20.4	17.5	na	-5.8	-7.5	-13.2	-14.0
Uzbekistan	na	30.0	31.2	33.0	33.9	34.6	na	0.7	1.4	2.7	2.1
Total Net Imports	-1.8	-42.6	-63.7	-77.8	-74.3	-70.4	69.4	6.9	5.1	-4.5	-5.2
Total Gross Inland Consumption	210.2	315.9	482.1	572.1	572.4	552.3	7.0	7.3	4.4	0.0	-3.5

ELECTRICITY PRODUCTION BY MAIN SOURCE IN %



Electricity generation in the former USSR also peaked in 1990, then decreasing to 1992. While hydro power output increased to 1991 (3% per year) with a 6.5% drop in 1992, nuclear production, which increased eight fold to 1990, stagnated in 1991 and dropped in 1992 to a level comparable to that of 1986. Thermal generation remains the most important source of electricity with about three quarters of total generation in 1992.

INPUTS FOR THERMAL POWER GENERATION: FUEL SHARES



Regarding the fuel inputs for thermal power generation, solid fuels are relatively stable in the period and lost first place as the most important input from the early 1980s. Indeed, gas became the most important fuel for power generation even before 1986. Consumption of oil for electricity production has been decreasing since 1980, as a result of the penetration of natural gas.

The energy intensity of the former USSR (bearing in mind all the necessary precautions when determining GDP) is five to six times higher than the average of the European Union. From 1980 to 1990, intensity improved by about 1% per year, but between 1990 and 1992 it reversed this trend: It lost 7% in 1991, and 12% in 1992. These losses in efficiency are mainly due to the significant drop in economic activity while at the same time there are fixed basic energy needs to satisfy.

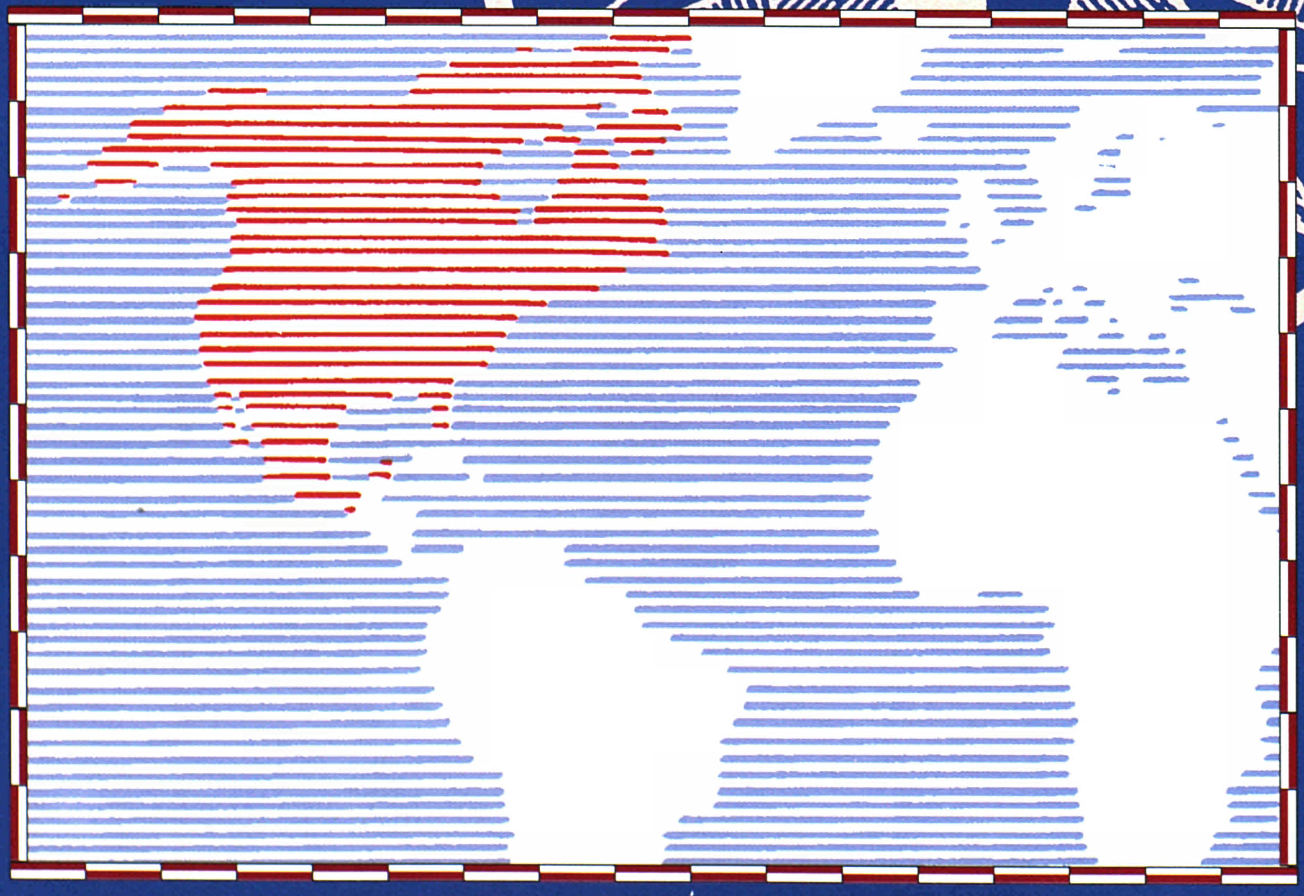
FORMER USSR: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	1043	1358	1574	1625	1534	1423	4.5	2.5	0.8	-5.6	-7.3
Solids	324	334	318	297	266	256	0.5	-0.8	-1.7	-10.5	-3.8
Oil	461	606	618	574	518	452	4.7	0.3	-1.8	-9.7	-12.8
Natural gas	216	360	555	660	655	632	8.9	7.5	4.4	-0.7	-3.6
Nuclear	7	19	42	55	55	45	18.8	14.1	7.1	0.2	-17.9
Hydro	13	18	20	22	23	21	5.4	1.9	1.7	4.9	-6.5
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	22	21	21	18	18	18	-0.8	0.0	-4.0	0.0	0.0
Net Imports	-125	-212	-250	-251	-189	-192	9.2	2.8	0.1	-24.8	2.0
Solids	-10	-11	-10	-12	-11	-9	1.0	-1.4	3.6	-2.4	-21.9
Oil	-112	-157	-174	-158	-101	-112	5.8	1.7	-2.3	-36.0	10.9
Crude oil	*-77*	*-116*	*-119*	*-109*	*-57*	*-77*	*7.2*	*0.4*	*-2.2*	*-47.2*	*34.7*
Oil products	*-35*	*-41*	*-55*	*-50*	*-44*	*-35*	*2.4*	*5.0*	*-2.5*	*-11.5*	*-20.1*
Natural gas	-2	-43	-64	-78	-74	-70	69.4	6.9	5.1	-4.5	-5.2
Electricity	-1	-2	-2	-3	-2	-1	9.8	7.2	4.8	-44.3	-56.1
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	908	1132	1294	1357	1333	1219	3.7	2.3	1.2	-1.8	-8.5
Solids	313	322	304	285	254	247	0.5	-0.9	-1.6	-10.8	-3.0
Oil	345	438	428	409	412	337	4.1	-0.4	-1.1	0.9	-18.3
Natural gas	210	316	482	572	572	552	7.0	7.3	4.4	0.0	-3.5
Other *(1)*	41	56	81	92	94	84	5.5	6.2	3.2	2.8	-11.1
Electricity Generation in TWh	999	1321	1621	1748	1703	1594	4.8	3.5	1.9	-2.6	-6.4
Nuclear	26	73	161	212	212	174	18.8	14.1	7.1	0.2	-17.9
Hydro	155	212	238	254	266	249	5.4	1.9	1.7	4.9	-6.5
Thermal	818	1036	1222	1283	1224	1171	4.0	2.8	1.2	-4.5	-4.3
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	269	340	415	438	414	na	4.0	3.4	1.3	-5.4	na
Solids	120	133	133	139	132	na	1.8	0.0	1.1	-5.4	na
Oil	75	107	99	68	64	na	6.2	-1.4	-8.9	-5.4	na
Gas	73	97	182	229	217	211	4.8	11.0	5.9	-5.3	-2.7
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	2	2	2	2	2	na	2.9	-3.5	-0.9	0.0	na
Average Thermal Efficiency in %	26	26	25	25	25	na	0.1	-0.6	-0.1	0.9	na
Non-Energy Uses	28	40	37	41	33	na	6.4	-1.2	2.5	-20.5	na
Total Final Energy Demand	658	811	896	919	896	na	3.5	1.7	0.6	-2.5	na
Solids	177	189	145	138	118	na	1.1	-4.4	-1.1	-14.9	na
Oil	216	268	276	269	279	na	3.6	0.5	-0.6	3.7	na
Gas	124	182	238	277	290	279	6.5	4.6	3.9	4.8	-3.9
Electricity	67	83	101	107	107	99	3.7	3.3	1.6	-0.5	-7.1
Heat	54	71	118	111	86	na	4.6	8.8	-1.6	-22.4	na
Biomass	20	18	19	16	16	na	-1.2	0.4	-4.3	0.0	na
CO2 Emissions in Mt of CO2											
Total	2645	3233	3471	3551	3459	na	3.4	1.2	0.6	-2.6	na
Excluding Bunkers and Air Transport	2567	3157	3387	3481	3402	na	3.5	1.2	0.7	-2.3	na
Indicators											
Population (Million)	252.4	265.5	280.3	289.5	290.9	292.49	0.8	0.9	0.8	0.5	0.5
GDP (Index 1985 = 100)	na	83.5	103.3	112.1	102.6	83.7	na	3.6	2.1	-8.5	-18.4
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	1553	1435	1387	1489	1668	na	-1.3	-0.8	7.4	12.1
Gross Inl. Consumption/Capita (toe/inhabitant)	3.60	4.26	4.62	4.69	4.58	4.17	2.9	1.3	0.4	-2.3	-9.0
Electricity Generated/Capita (kWh/inhabitant)	3956	4975	5783	6038	5853	5451	3.9	2.5	1.1	-3.1	-6.9
CO2 Emissions/Capita (t of CO2/inhabitant)	10.17	11.89	12.09	12.03	11.69	na	2.6	0.3	-0.1	-2.8	na
Import Dependency (%)	-13.7	-18.7	-19.2	-18.4	-14.1	-15.7	5.3	0.5	-1.1	-23.4	11.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

NAFTA

PART V

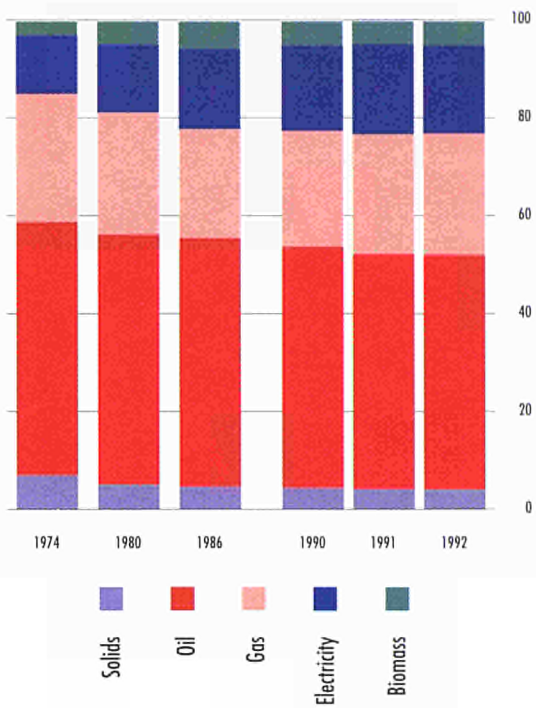


NAFTA

This is a new region in terms of showing energy data in this special issue of Energy in Europe. NAFTA comprises Canada, Mexico and the United States.

Final energy demand in the 1974 to 1992 period increased 13% overall. Only between 1980 and 1986 there was a decrease in consumption of the order of 0.3% per year. Looking at each fuel, solid fuels consumption has been on a declining path, while electricity demand shows a steady increasing trend (3% per year in the period). Consumption of oil has fluctuated, although overall it increased 5% from 1974 to 1992. Natural gas demand, having declined to 1986, shows a steady increase to 1992 in the order of 3.4% per year. The time series for heat presented a break in 1991 due to a new statistical accounting system of this energy form in the United States. Prior to 1991, heat in final demand was accounted in terms of fossil fuels being used to produce it (mainly in industry). However, all these developments are dominated by the United States market. In fact in 1992, this country accounted for 84% of NAFTA's final energy demand (over 90% for solids, and over o0% for all other). In the same year, relative to total NAFTA, the United States accounted for 68% of population and for 89% of GDP.

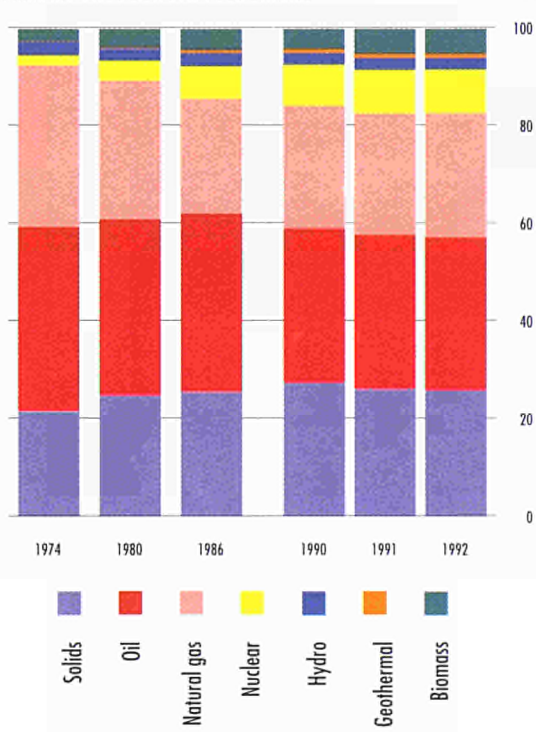
FINAL ENERGY DEMAND: FUEL SHARES

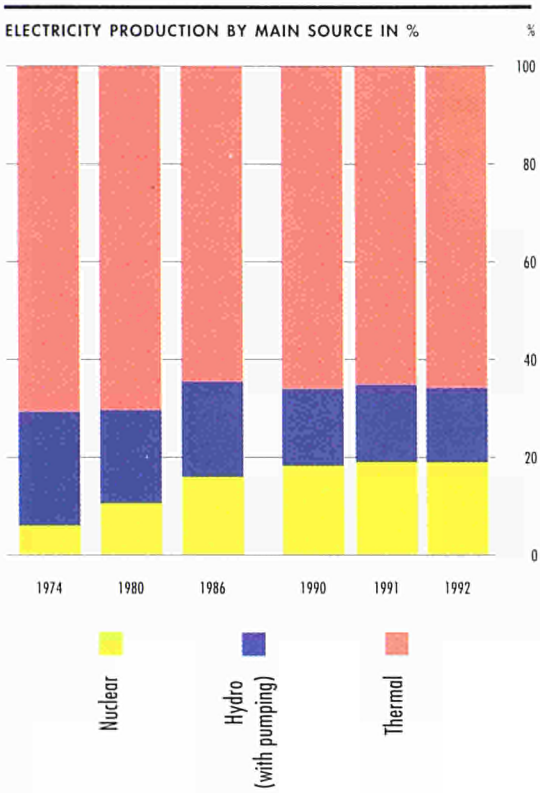


Gross inland consumption in the NAFTA region shows a steady increase in the period of over 1% per year. This growth, however, was not equally shared by all primary fuels. Solids demand increased by over 46% in the period. Although there was a drop in demand for oil and natural gas between 1980 and 1986, gas has steadily recovered since then, but oil consumption has fluctuated somewhat to attain in 1992 a level 3% below the 1980 peak.

Energy production in NAFTA countries has been steadily increasing in the period. In 1992, fossil fuels accounted for 82% of the total. Nuclear energy, like in other parts of the world, was mainly developed between 1974 and 1986. Since then, it increased less dramatically to 1991 and stagnated in 1992. Currently, it accounts for 9% of total. Renewable energy sources (9% of total production in 1992) doubled their production in the period, mainly due to expansion of geothermal and biomass.

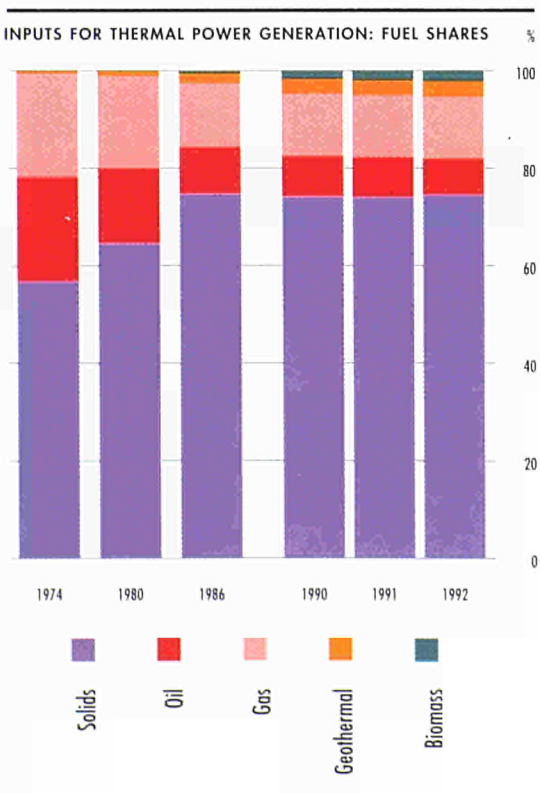
PRIMARY PRODUCTION: FUEL SHARES





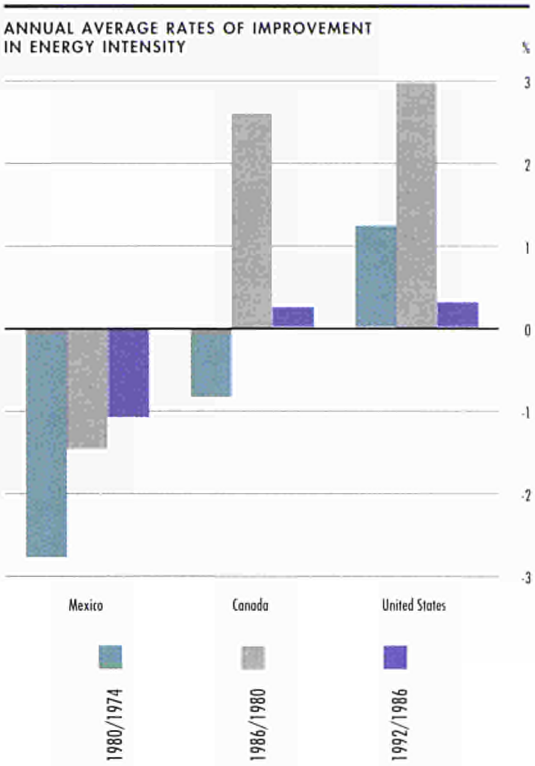
The NAFTA region is **a net importer of energy** in the form of oil. Indeed, it is an exporter of solid fuels and practically selfsufficient for natural gas.Solid fuels exports increased from 31 Mtoe in 1974 to 81 Mtoe in 1991 and 72 Mtoe in 1992. Crude oil imports increased until 1980, dropped to 1986 but increased again to 1992 to a level similar to that of 1980. Imports of oil products have dropped considerably, mainly due to decreases in the United States. Total oil imports accounted for 30% of total oil inland requirements in 1992 (32% in 1974). The self-sufficiency in natural gas is obtained by significant exports from Canada to the United States.

Electricity generation is mainly based on thermal units. Nuclear became more important than hydro in the late 1980s. These latter sources accounted, in 1992, for 19% and 15% of total generation respectively.



Thermal generation of electricity has been increasingly dominated by solid fuels, which accounted for three quarters of fuel inputs in 1992 (57% in 1974). While oil and gas had the same participation in 1974 (around 21% each), gas accounted for 13% in 1992 and oil for only 7%. Geothermal and biomass increased their contribution to thermal generation. Together, their consumption increased eleven times. Average thermal efficiency has improved from 35% in 1974 to 40% in 1992.

NAFTA is however a heterogeneous region. This is clearly shown by some indicators. In terms of **energy intensity** the first conclusion is that while Canada and the United States were, in 1974, 27% and 17% more intensive than Mexico respectively, in 1992, they were less intensive (18% for Canada and 35% for the United States). The trends are therefore different: Canada and the United States improved their intensity by 0.7% per year and 1.5% per year in the period respectively, while Mexico saw its intensity increased at an average annual rate of 1.8% per year. Compared to the European Union, the average NAFTA intensity improved slightly less in the period and, in 1992, it was 15% higher.



Energy consumption per capita on average in NAFTA was almost double that of the European Union in 1992, but it presents a downward trend contrary to a slight increase in Europe. Although Mexico has increased this ratio by 2.9% per year in the period it was, in 1992, still only 18% of the United States figure. Canada's consumption per capita is slightly higher that of the United States. Here, the weather conditions seem to impact.

The disparities in the two preceding indicators result, among several reasons, from the levels of wealth, measured by the **GDP per capita**. In fact, while Mexico had 2.9 thousand 1985 ECU per inhabitant in 1992, Canada and the United States had 19.3 and 23.7 thousand 1985 ECU per inhabitant respectively. Compared to the average of the European Union (11.8 thousand 1985 ECU per inhabitant), NAFTA was still 55% higher in 1992 (75% higher in 1974).

As a result of the levels and patterns of energy demand, **CO2 emissions per capita** are also significantly higher in NAFTA than in Europe (87% in 1974 and 78% in 1992). Among the countries of this region in 1992, Mexico had the lowest level (3.5 tonnes of CO2 per inhabitant) against a maximum of 19.6 tonnes of CO2 per inhabitant in the United States, and compared to 8.7 tonnes of CO2 per inhabitant in Europe.

Energy developments in NAFTA and in the United States are described in the following tables.

MAIN INDICATORS: COMPARISON

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
NAFTA	430	407	344	334	345	339	-0.9	-2.8	-0.7	3.2	-1.6	-1.3
Canada	466	489	418	399	405	411	0.8	-2.6	-1.2	1.5	1.7	-0.7
Mexico	366	432	471	501	508	502	2.8	1.5	1.6	1.5	-1.2	1.8
United States	430	398	332	322	333	326	-1.2	-3.0	-0.8	3.4	-1.9	-1.5
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inl. Consumption/Capita (toe/inhabitant)												
NAFTA	6.4	6.5	6.0	6.2	6.2	6.2	0.3	-1.3	0.9	0.6	-0.3	-0.2
Canada	6.8	8.1	7.7	8.0	7.8	7.9	2.8	-0.7	0.7	-1.7	1.4	0.8
Mexico	0.9	1.3	1.3	1.4	1.4	1.4	7.0	0.0	2.0	3.0	-0.8	2.9
United States	7.9	7.9	7.4	7.7	7.8	7.7	0.1	-1.2	1.1	0.9	-0.4	-0.1
European Union	3.2	3.4	3.4	3.5	3.5	3.5	0.7	0.0	0.9	0.8	-0.9	0.4
GDP/Capita (thousand 1985 ECU/inhabitant)												
NAFTA	14.83	15.92	17.36	18.48	18.02	18.26	1.2	1.5	1.6	-2.5	1.3	1.2
Canada	14.70	16.52	18.54	19.95	19.32	19.27	2.0	1.9	1.8	-3.1	-0.3	1.5
Mexico	2.36	3.00	2.76	2.80	2.85	2.86	4.1	-1.4	0.4	1.5	0.4	1.1
United States	18.34	19.85	22.16	23.88	23.32	23.68	1.3	1.9	1.9	-2.4	1.6	1.4
European Union	8.46	9.56	10.40	11.58	11.64	11.72	2.0	1.4	2.7	0.6	0.7	1.8
CO2 Emissions/Capita (t of CO2/inhabitant)												
NAFTA	17.4	16.9	15.5	15.9	15.5	15.5	-0.4	-1.5	0.6	-2.2	-0.1	-0.6
Canada	17.3	18.8	16.7	17.5	17.0	17.4	1.4	-2.0	1.2	-2.9	2.2	0.0
Mexico	2.1	3.0	3.2	3.4	3.5	3.5	6.2	1.3	1.7	1.8	0.3	3.0
United States	21.7	21.1	19.5	20.1	19.7	19.6	-0.5	-1.3	0.8	-2.2	-0.3	-0.5
European Union	9.3	9.4	8.6	8.7	8.8	8.7	0.1	-1.4	0.2	1.3	-2.2	-0.4

NAFTA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	1653.1	1895.2	1967.6	2118.1	2150.9	2154.5	2.3	0.6	1.9	1.5	0.2
Solids	353.3	470.2	502.7	580.6	561.4	555.5	4.9	1.1	3.7	-3.3	-1.0
Oil	624.2	683.5	719.0	670.0	677.1	671.6	1.5	0.8	-1.8	1.1	-0.8
Natural gas	549.0	539.9	463.9	534.3	536.0	549.4	-0.3	-2.5	3.6	0.3	2.5
Nuclear	35.4	79.3	132.9	179.1	192.5	193.0	14.4	9.0	7.7	7.4	0.3
Hydro	45.7	47.0	53.7	51.0	53.2	51.3	0.5	2.2	-1.3	4.2	-3.5
Geothermal	2.6	5.4	12.3	18.1	18.6	19.0	12.7	14.8	10.2	2.7	1.8
Biomass	42.9	69.8	82.9	84.9	112.2	114.8	8.5	2.9	0.6	32.1	2.3
Net Imports	257.5	243.7	138.7	211.4	173.7	201.4	-0.9	-9.0	11.1	-17.8	16.0
Solids	-30.5	-56.0	-60.2	-76.3	-81.4	-71.8	10.7	1.2	6.1	6.6	-11.8
Oil	289.0	299.1	199.6	286.6	254.0	271.4	0.6	-6.5	9.5	-11.4	6.9
Crude oil	*179.1*	*264.7*	*169.6*	*267.9*	*249.6*	*264.8*	*6.7*	*-7.2*	*12.1*	*-6.8*	*6.1*
Oil products	*109.9*	*34.4*	*30.0*	*18.7*	*4.4*	*6.6*	*-17.6*	*-2.2*	*-11.1*	*-76.7*	*52.7*
Natural gas	-1.0	0.7	-0.8	1.1	0.9	1.6	-	-	-	-19.5	82.9
Electricity	0.0	0.0	0.0	0.0	0.2	0.2	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	1890.1	2086.7	2073.9	2256.2	2300.9	2332.5	1.7	-0.1	2.1	2.0	1.4
Solids	328.9	399.9	440.3	484.8	479.0	481.5	3.3	1.6	2.4	-1.2	0.5
Oil	889.4	943.8	893.1	917.2	902.2	916.5	1.0	-0.9	0.7	-1.6	1.6
Natural gas	545.2	541.4	458.6	521.0	543.0	556.5	-0.1	-2.7	3.2	4.2	2.5
Other *(1)*	126.6	201.5	281.9	333.3	376.7	378.1	8.1	5.8	4.3	13.0	0.4
Electricity Generation in TWh	2279.1	2862.5	3197.6	3774.7	3874.9	3909.9	3.9	1.9	4.2	2.7	0.9
Nuclear	135.9	304.2	510.1	687.4	738.6	740.5	14.4	9.0	7.7	7.4	0.3
Hydro	531.3	546.7	624.3	593.3	618.3	596.8	0.5	2.2	-1.3	4.2	-3.5
Thermal	1611.8	2011.6	2063.2	2494.0	2518.0	2572.6	3.8	0.4	4.9	1.0	2.2
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	399.0	475.6	492.6	552.4	555.1	556.5	3.0	0.6	2.9	0.5	0.2
Solids	226.3	307.0	368.2	409.4	411.3	415.2	5.2	3.1	2.7	0.5	1.0
Oil	85.2	72.7	46.9	45.6	44.9	40.7	-2.6	-7.0	-0.7	-1.6	-9.4
Gas	84.8	90.2	64.6	70.6	70.5	70.9	1.0	-5.4	2.3	-0.2	0.5
Geothermal	2.6	5.4	12.3	18.1	18.6	19.0	12.7	14.8	10.2	2.7	1.8
Biomass	0.1	0.3	0.6	8.6	9.8	10.7	32.0	10.0	93.8	14.2	9.7
Average Thermal Efficiency in %	34.7	36.4	36.0	38.8	39.0	39.8	0.8	-0.2	1.9	0.5	1.9
Non-Energy Uses	49.5	64.1	61.2	68.0	66.7	70.2	4.4	-0.8	2.7	-1.9	5.2
Total Final Energy Demand	1408.3	1480.6	1450.6	1558.7	1561.9	1592.0	0.8	-0.3	1.8	0.2	1.9
Solids	97.7	75.0	68.0	69.3	65.7	65.0	-4.3	-1.6	0.5	-5.1	-1.0
Oil	730.2	758.9	738.2	769.5	749.2	765.3	0.6	-0.5	1.0	-2.6	2.2
Gas	370.4	371.2	324.4	371.1	383.8	397.8	0.0	-2.2	3.4	3.4	3.6
Electricity	167.0	205.0	235.2	270.2	282.8	283.2	3.5	2.3	3.5	4.7	0.1
Heat	0.2	1.0	2.4	2.2	6.7	6.6	29.8	14.8	-2.0	206.9	-1.4
Biomass	42.8	69.5	82.3	76.4	73.7	74.2	8.4	2.9	-1.9	-3.6	0.7
CO2 Emissions in Mt of CO2											
Total	5146	5461	5384	5803	5751	5845	1.0	-0.2	1.9	-0.9	1.6
Excluding Bunkers and Air Transport	4982	5273	5162	5549	5505	5602	1.0	-0.4	1.8	-0.8	1.8
Indicators											
Population (Million)	296.4	322.2	347.2	365.1	370.1	376.5	1.4	1.3	1.3	1.4	1.7
GDP (Index 1985 = 100)	74.9	87.4	102.7	115.0	113.7	117.1	2.6	2.7	2.9	-1.1	3.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	430	407	344	334	345	339	-0.9	-2.8	-0.7	3.2	-1.6
Gross Inl. Consumption/Capita (toe/inhabitant)	6.38	6.48	5.97	6.18	6.22	6.19	0.3	-1.3	0.9	0.6	-0.3
Electricity Generated/Capita (kWh/inhabitant)	7690	8884	9209	10338	10469	10384	2.4	0.6	2.9	1.3	-0.8
CO2 Emissions/Capita (t of CO2/inhabitant)	17.36	16.95	15.51	15.89	15.54	15.52	-0.4	-1.5	0.6	-2.2	-0.1
Import Dependency (%)	13.5	11.5	6.6	9.2	7.4	8.5	-2.7	-8.8	8.7	-19.5	14.4

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

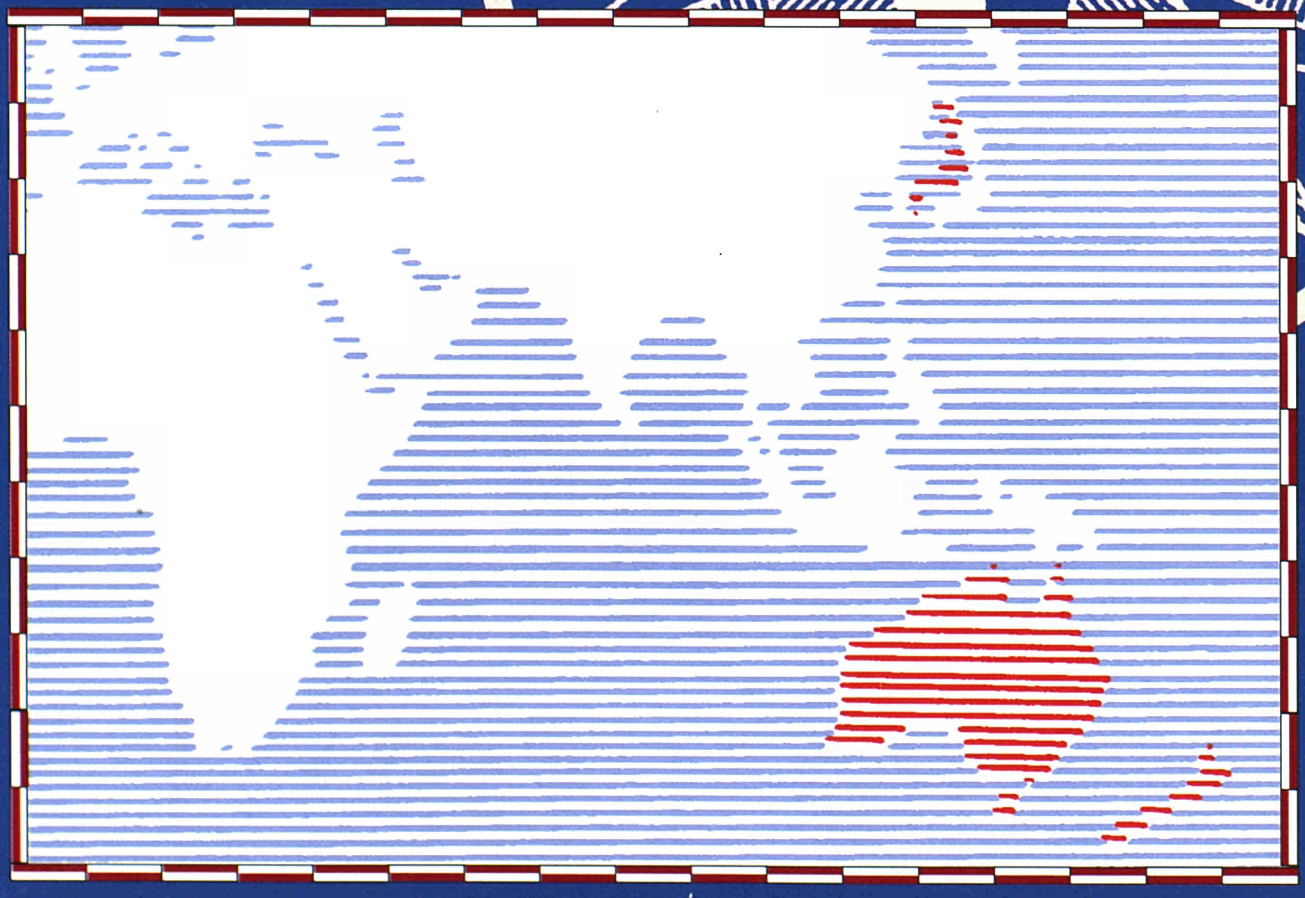
UNITED STATES: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	1419.5	1547.8	1551.8	1650.4	1663.9	1658.5	1.5	0.0	1.6	0.8	-0.3
Solids	339.5	447.9	468.1	539.1	518.4	517.1	4.7	0.7	3.6	-3.8	-0.3
Oil	500.7	491.4	490.6	424.5	423.8	414.4	-0.3	0.0	-3.5	-0.2	-2.2
Natural gas	480.5	454.6	375.8	419.2	416.0	419.4	-0.9	-3.1	2.8	-0.8	0.8
Nuclear	31.6	69.4	114.4	159.4	169.2	170.9	14.0	8.7	8.6	6.2	1.0
Hydro	26.2	24.0	25.3	23.5	24.8	21.9	-1.4	0.9	-1.8	5.5	-11.7
Geothermal	2.2	4.6	9.4	13.7	14.0	14.6	12.8	12.6	9.9	1.6	4.9
Biomass	38.8	56.0	68.3	70.9	97.8	100.1	6.3	3.4	1.0	37.8	2.4
Net Imports	282.4	302.0	251.8	337.7	319.0	350.8	1.1	-3.0	7.6	-5.5	10.0
Solids	-32.1	-57.0	-52.7	-64.8	-66.3	-61.6	10.1	-1.3	5.3	2.3	-7.1
Oil	292.9	334.9	285.3	369.2	345.6	365.9	2.3	-2.6	6.7	-6.4	5.9
Crude oil	*183.3*	*295.6*	*251.7*	*346.4*	*338.0*	*359.0*	*8.3*	*-2.6*	*8.3*	*-2.4*	*6.2*
Oil products	*109.6*	*39.3*	*33.6*	*22.8*	*7.6*	*6.9*	*-15.7*	*-2.6*	*-9.2*	*-66.6*	*-9.3*
Natural gas	20.5	21.8	16.1	33.2	37.8	44.0	1.0	-4.9	19.9	13.8	16.5
Electricity	1.1	2.3	3.1	0.2	1.9	2.4	13.2	5.0	-51.5	-	27.3
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	1684.9	1801.0	1772.2	1920.3	1959.1	1983.8	1.1	-0.3	2.0	2.0	1.3
Solids	312.1	376.2	412.8	456.7	450.0	451.8	3.2	1.6	2.6	-1.5	0.4
Oil	774.0	791.7	750.5	756.6	741.9	753.2	0.4	-0.9	0.2	-1.9	1.5
Natural gas	499.0	476.9	388.4	439.3	459.6	468.7	-0.8	-3.4	3.1	4.6	2.0
Other *(1)*	99.9	156.2	220.4	267.7	307.6	310.0	7.7	5.9	5.0	14.9	0.8
Electricity Generation in TWh	1957.3	2427.3	2639.7	3178.5	3248.8	3267.5	3.7	1.4	4.8	2.2	0.6
Nuclear	121.3	266.2	438.9	611.6	649.4	656.0	14.0	8.7	8.6	6.2	1.0
Hydro	304.1	278.8	293.8	273.2	288.2	254.4	-1.4	0.9	-1.8	5.5	-11.7
Thermal	1532.0	1882.4	1907.1	2293.8	2311.2	2357.2	3.5	0.2	4.7	0.8	2.0
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	377.8	442.9	452.6	502.4	504.0	503.2	2.7	0.4	2.6	0.3	-0.2
Solids	217.8	292.0	348.7	387.6	388.5	391.6	5.0	3.0	2.7	0.2	0.8
Oil	78.1	60.6	33.4	27.4	27.2	22.4	-4.1	-9.4	-4.8	-0.8	-17.7
Gas	79.6	85.6	60.7	65.3	64.8	64.1	1.2	-5.6	1.8	-0.9	-1.0
Geothermal	2.2	4.6	9.4	13.7	14.0	14.6	12.8	12.6	9.9	1.6	4.9
Biomass	0.1	0.1	0.3	8.3	9.5	10.5	9.6	19.2	125.8	14.3	9.7
Average Thermal Efficiency in %	34.9	36.5	36.2	39.3	39.4	40.3	0.8	-0.1	2.0	0.5	2.1
Non-Energy Uses	43.1	56.7	53.9	61.0	59.0	62.4	4.7	-0.8	3.2	-3.3	5.7
Total Final Energy Demand	1239.7	1262.1	1224.6	1311.1	1312.4	1337.0	0.3	-0.5	1.7	0.1	1.9
Solids	90.1	67.7	61.2	63.6	60.1	59.4	-4.7	-1.7	1.0	-5.5	-1.2
Oil	628.6	641.7	626.8	644.7	625.3	638.8	0.3	-0.4	0.7	-3.0	2.2
Gas	338.8	322.7	271.4	312.0	323.0	334.6	-0.8	-2.8	3.6	3.5	3.6
Electricity	143.5	174.2	195.6	226.5	238.5	238.2	3.3	2.0	3.7	5.3	-0.1
Heat	0.0	0.0	1.6	1.7	6.1	6.2	-	-	1.4	263.5	1.6
Biomass	38.7	55.8	68.0	62.6	59.5	59.8	6.3	3.3	-2.0	-5.0	0.6
CO2 Emissions in Mt of CO2											
Total	4633	4800	4700	5034	4977	5047	0.6	-0.3	1.7	-1.1	1.4
Excluding Bunkers and Air Transport	4481	4628	4494	4799	4749	4823	0.5	-0.5	1.7	-1.0	1.6
Indicators											
Population (Million)	213.9	227.8	240.7	249.9	252.7	256.9	1.1	0.9	0.9	1.1	1.7
GDP (Index 1985 = 100)	75.7	87.3	103.0	115.2	113.7	117.5	2.4	2.8	2.9	-1.3	3.3
Gross Inl. Consumption/GDP (toe/1985 MECU)	430	398	332	322	333	326	-1.2	-3.0	-0.8	3.4	-1.9
Gross Inl. Consumption/Capita (toe/inhabitant)	7.88	7.91	7.36	7.68	7.75	7.72	0.1	-1.2	1.1	0.9	-0.4
Electricity Generated/Capita (kWh/inhabitant)	9153	10657	10968	12718	12857	12719	2.6	0.5	3.8	1.1	-1.1
CO2 Emissions/Capita (t of CO2/inhabitant)	21.67	21.07	19.53	20.14	19.70	19.65	-0.5	-1.3	0.8	-2.2	-0.3
Import Dependency (%)	16.7	16.5	14.1	17.3	16.0	17.4	-0.2	-2.6	5.3	-7.5	8.6

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PART VI

OECD PACIFIC



OECD PACIFIC

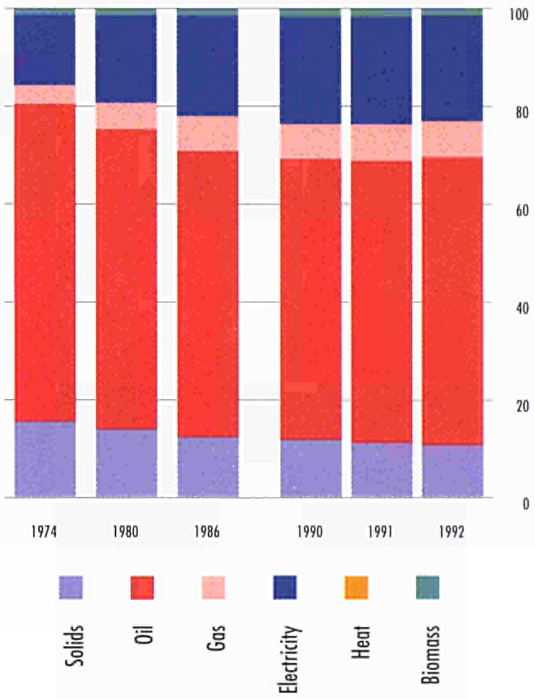
This region comprises the three OECD countries of the Pacific: Australia, Japan and New Zealand. Given the size of its economy, population and energy needs, Japan dominates the energy developments in this region.

Final energy demand in the 1974 to 1992 period steadily increased reaching 377 Mtoe, or 32% higher than in 1974. Looking at each fuel, solid fuels consumption has been on a slight declining path (-0.4% in the period), while gas and electricity demand practically doubled between 1974 and 1992. Consumption of oil declined to 1986 and, since then, it has increased by 3.8% per year on average. As already stated, these developments are dominated by the Japanese market, with accounted, in 1992, for 82% of final energy demand in the region. In 1992, Japan accounted for 86% of population and for 90% of GDP.

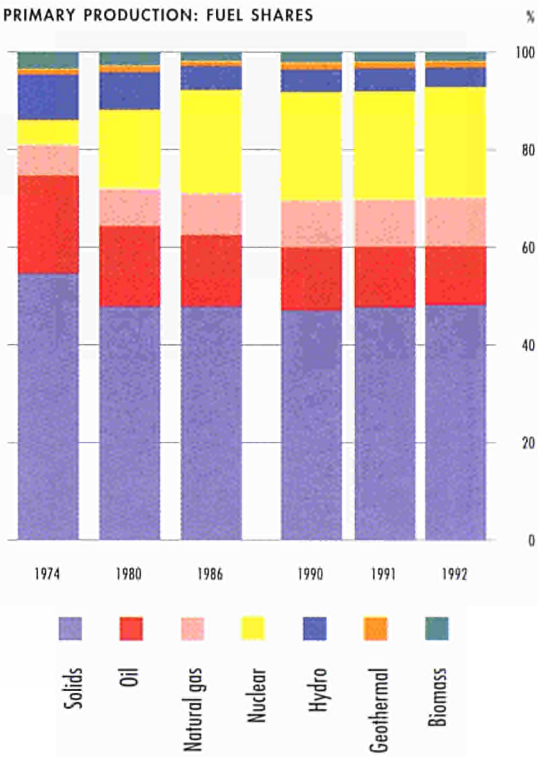
Gross inland consumption in the OECD Pacific shows a steady increase in the period of almost 2% per year. However, the fastest growth (4.3% per year from 1986 to 1990) coincided with the period of the drop in oil prices. Until 1986, there was a relatively modest growth of just more than 1% per year. In 1991 and 1992, the growth was only 2.4% and 1.3% respectively. This growth was not equally shared by all primary fuels. Solids demand increased by 34% in the period. Natural gas demand increased six fold in the period. Oil consumption, which decreased 0.4% per year until 1980 and 1.9% per year in the first half of the 1980s, recovered to 4.7% per year to 1990, fell slightly (0.3%) in 1991 and grew again in 1992 by almost 3% (GDP growth was 3%). In 1992, the shares of these fuels in gross consumption were: Oil with 54%; Solids with 21%; and Natural gas with 12%.

Energy production has been steadily increasing in the period by over 5% per year on average. In 1992, solid fuels accounted for 48% of total, oil accounted for 12% and natural gas for 10%. Nuclear energy (used in Japan only), like in other parts of the world, was mainly developed between 1974 and 1986 (growing almost 20% per year on average). Contrary to other regions with this form of energy, nuclear continued to increase. By the second half of the 1980s, nuclear production had reached the same weight as oil and natural gas taken together. Currently, it accounts for 23% of total. Renewable energy sources only increased slightly (1.5% per year), thus loosing share in total (14% in 1974 and 7% in 1992).

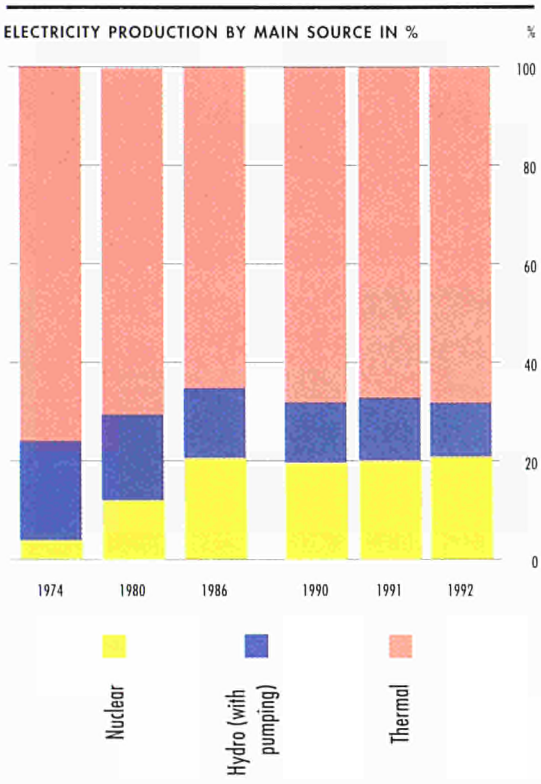
FINAL ENERGY DEMAND: FUEL SHARES



PRIMARY PRODUCTION: FUEL SHARES

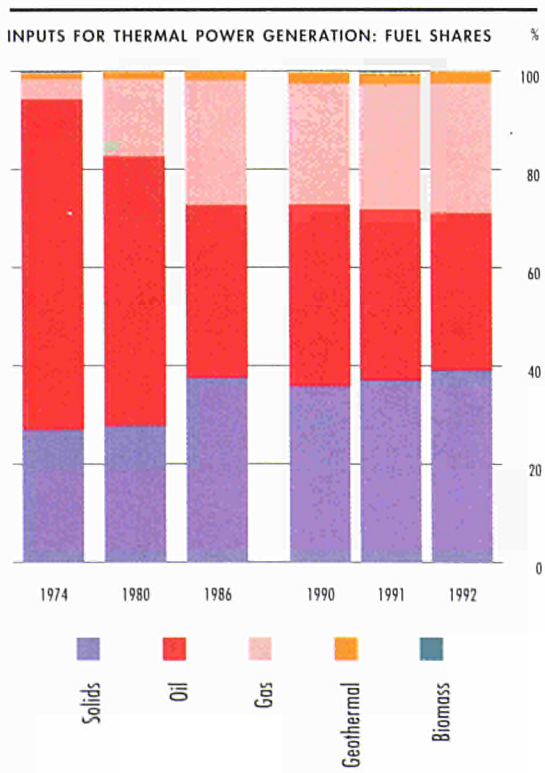


Despite a 6% per year growth in geothermal energy, hydro has been practically stable and biomass grew by 1.8% per year in the period.



The OECD Pacific region is a **net importer of energy**. But this is due to the fact that Japan has little domestic energy resources and its net imports more than make up for Australian and New Zealand exports. In fact, Australia was, in 1992, the largest coal exporter in the world. Australia and New Zealand together, increased their net exports from 2 Mtoe in 1974 to 80 Mtoe in 1992, or an overall increase of forty times. After 1990, Australia exported natural gas to Japan. The degree of self-sufficiency of the region has improved from 23% in 1974 to 46% in 1992.

Electricity generation in the region as a whole is mainly based on thermal units (68% of total in 1992). Nuclear became more important than hydro in the early 1980s and they accounted, in 1992, for 21% and 11% of total generation. Total generation has increased steadily in the period by 3.8% per year on average. The average load factor of this sector, after a deterioration to 1986, improved to 1991 when it was 5% higher than in 1974.



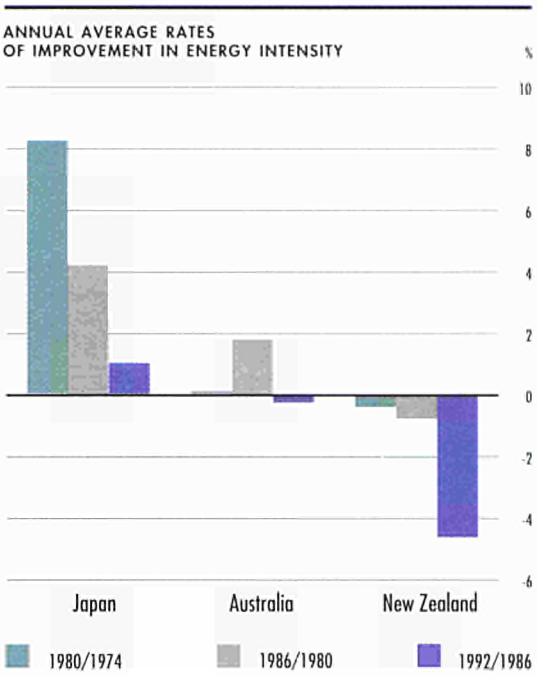
The increment of **inputs for thermal generation** of electricity has been mainly supplied by gas, and solids. Oil consumption increased again in the second half of the 1980s, but dropped to 1992, when they were 30% below the 1974 level. The shares of fossil fuels in total inputs were: Solids with 39% (27% in 1974); Oil with 32% (68% in 1974); and gas with 26% (4% in 1974). Geothermal and biomass inputs accounted for 3% of total in 1992. The strong penetration of natural gas is one of the elements behind the improvement of the average thermal efficiency from 36% in 1974 to 44% in 1992.

In terms of **energy intensity** the first conclusion is that there were significant gains in the period, but the highest rate of gain occurred in the 1970s (7% per year). After a slow down of gains in the second half of the 1980s, intensity continued to diminish in 1991 (1.3%) and 1992 (1.7%). Comparing energy intensities among the European Union, Japan and the United States, Japan has by far the lowest ratio in 1992 (42% below that of the United States and 36% below the European average). However, in 1974 the picture was different with the highest level in Japan (2% and 15% higher than the United States and Europe respectively). This means that Japan had the fastest rate of gains in energy intensity.

Energy consumption per capita on average has increased in the period and, in 1992, was somewhat above that of the European Union (9%), but 50% below the United States level.

CO2 emissions per capita have slightly increased in the period (5%). However, there are two distinct periods: until 1986 there was a decline in this ratio (almost 1% per year), but since it has increased by almost 3% per year. This behaviour is different from that of the European Union where, with about the same level in 1974 as Japan, the ratio seems more or less stable after 1986. Compared to the United States, Japanese per capita CO2 emissions are less than half.

The summary energy balances for OECD Pacific as a whole and Japan are described in the following tables.



OECD PACIFIC: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	102.3	134.6	208.7	238.5	251.8	258.1	4.7	7.6	3.4	5.6	2.5
Solids	55.8	64.6	99.9	112.3	120.1	124.4	2.5	7.5	3.0	7.0	3.6
Oil	20.6	22.2	30.6	31.1	31.2	31.0	1.3	5.5	0.4	0.4	-0.7
Natural gas	6.4	10.3	17.8	22.8	24.2	25.8	8.2	9.5	6.5	6.0	6.5
Nuclear	5.1	21.5	43.9	52.7	55.6	58.2	27.0	12.6	4.7	5.5	4.6
Hydro	9.5	10.3	10.1	10.9	11.7	10.2	1.5	-0.4	2.0	7.5	-13.4
Geothermal	1.2	1.8	2.2	3.4	3.4	3.5	6.9	3.5	11.5	0.7	2.0
Biomass	3.7	3.9	4.3	5.3	5.5	5.1	0.8	1.8	5.4	3.6	-6.2
Net Imports	317.5	306.1	255.1	307.5	304.3	302.5	-0.6	-3.0	4.8	-1.0	-0.6
Solids	27.9	19.0	2.5	1.0	-1.9	-9.9	-6.2	-28.8	-20.6	-	413.2
Oil	285.1	267.6	218.8	267.2	265.7	271.8	-1.1	-3.3	5.1	-0.5	2.3
Crude oil	*257.3*	*236.2*	*170.7*	*205.3*	*216.3*	*226.3*	*-1.4*	*-5.3*	*4.7*	*5.4*	*4.6*
Oil products	*27.8*	*31.4*	*48.0*	*61.8*	*49.4*	*45.5*	*2.0*	*7.4*	*6.5*	*-20.2*	*-7.8*
Natural gas	4.5	19.5	33.8	39.3	40.6	40.6	27.7	9.6	3.8	3.2	0.1
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Gross Inland Consumption	393.6	426.4	452.6	534.7	547.6	554.5	1.3	1.0	4.3	2.4	1.3
Solids	85.0	87.9	99.5	110.6	117.6	114.2	0.6	2.1	2.7	6.4	-2.9
Oil	278.2	271.2	241.3	289.8	288.9	297.2	-0.4	-1.9	4.7	-0.3	2.9
Natural gas	10.9	29.9	51.4	62.0	64.9	66.1	18.3	9.5	4.8	4.7	1.9
Other *(1)*	19.5	37.5	60.4	72.3	76.3	77.0	11.5	8.3	4.6	5.5	0.9
Electricity Generation in TWh	545.1	690.0	824.6	1036.7	1069.2	1078.2	4.0	3.0	5.9	3.1	0.8
Nuclear	19.7	82.6	168.3	202.3	213.5	223.3	27.0	12.6	4.7	5.5	4.6
Hydro	110.1	120.2	117.1	126.8	136.3	118.0	1.5	-0.4	2.0	7.5	-13.4
Thermal	415.3	487.3	539.2	707.7	719.5	736.9	2.7	1.7	7.0	1.7	2.4
Generation Capacity in GWe	129.7	175.3	215.9	237.9	242.5	na	5.1	3.5	2.5	1.9	na
Nuclear	3.9	15.7	25.8	31.6	31.6	na	26.1	8.7	5.2	0.0	na
Hydro	32.4	39.8	47.4	49.7	49.7	na	3.5	2.9	1.2	0.0	na
Thermal	93.4	119.7	142.7	156.6	161.2	na	4.2	3.0	2.3	2.9	na
Average Load Factor in %	48.0	44.9	43.6	49.7	50.3	na	-1.1	-0.5	3.3	1.2	na
Fuel Inputs for Thermal Power Generation	99.8	111.8	118.6	147.6	148.4	145.6	1.9	1.0	5.6	0.6	-1.9
Solids	26.7	30.8	44.3	52.7	55.0	56.6	2.4	6.2	4.4	4.4	3.0
Oil	67.7	61.5	41.8	54.8	51.9	46.9	-1.6	-6.2	7.0	-5.3	-9.7
Gas	4.1	17.5	30.2	36.5	37.9	38.5	27.6	9.5	4.9	3.9	1.5
Geothermal	1.2	1.8	2.2	3.4	3.4	3.5	6.9	3.5	11.5	0.7	2.0
Biomass	0.1	0.1	0.1	0.2	0.2	0.2	-3.0	3.0	6.7	3.6	-8.1
Average Thermal Efficiency in %	35.8	37.5	39.1	41.2	41.7	43.5	0.8	0.7	1.4	1.1	4.4
Non-Energy Uses	9.7	10.5	10.7	11.8	11.6	12.2	1.4	0.2	2.6	-1.9	5.4
Total Final Energy Demand	286.3	292.7	303.0	356.8	366.7	377.1	0.4	0.6	4.2	2.8	2.8
Solids	44.7	41.7	38.1	42.7	41.6	41.0	-1.2	-1.5	2.9	-2.6	-1.4
Oil	185.8	179.2	177.1	205.2	211.7	222.0	-0.6	-0.2	3.8	3.1	4.9
Gas	10.6	15.4	21.2	24.8	26.9	27.1	6.4	5.5	4.1	8.2	1.0
Electricity	41.6	52.6	62.3	78.7	81.1	81.8	4.0	2.9	6.0	3.0	0.9
Heat	0.0	0.1	0.1	0.2	0.2	0.3	14.8	5.5	9.5	16.3	9.2
Biomass	3.5	3.7	4.2	5.1	5.2	4.9	0.9	1.8	5.1	3.2	-6.6
CO2 Emissions in Mt of CO2											
Total	1128	1137	1157	1366	1390	1410	0.1	0.3	4.2	1.8	1.4
Excluding Bunkers and Air Transport	1114	1119	1132	1333	1356	1374	0.1	0.2	4.2	1.7	1.4
Indicators											
Population (Million)	126.9	134.6	140.8	144.0	144.6	145.3	1.0	0.7	0.6	0.5	0.4
GDP (Index 1985 = 100)	45.6	76.2	102.5	123.9	128.6	132.5	8.9	5.1	4.8	3.8	3.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	429	278	219	215	212	208	-7.0	-3.9	-0.6	-1.3	-1.7
Gross Inl. Consumption/Capita (toe/inhabitant)	3.10	3.17	3.22	3.71	3.79	3.82	0.3	0.3	3.7	2.0	0.8
Electricity Generated/Capita (kWh/inhabitant)	4297	5126	5859	7200	7392	7422	3.0	2.3	5.3	2.7	0.4
CO2 Emissions/Capita (t of CO2/inhabitant)	9.35	8.75	8.36	9.62	9.75	9.85	-1.1	-0.8	3.6	1.4	1.0
Import Dependency (%)	76.9	69.7	55.6	56.9	54.9	53.9	-1.6	-3.7	0.6	-3.4	-1.8

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

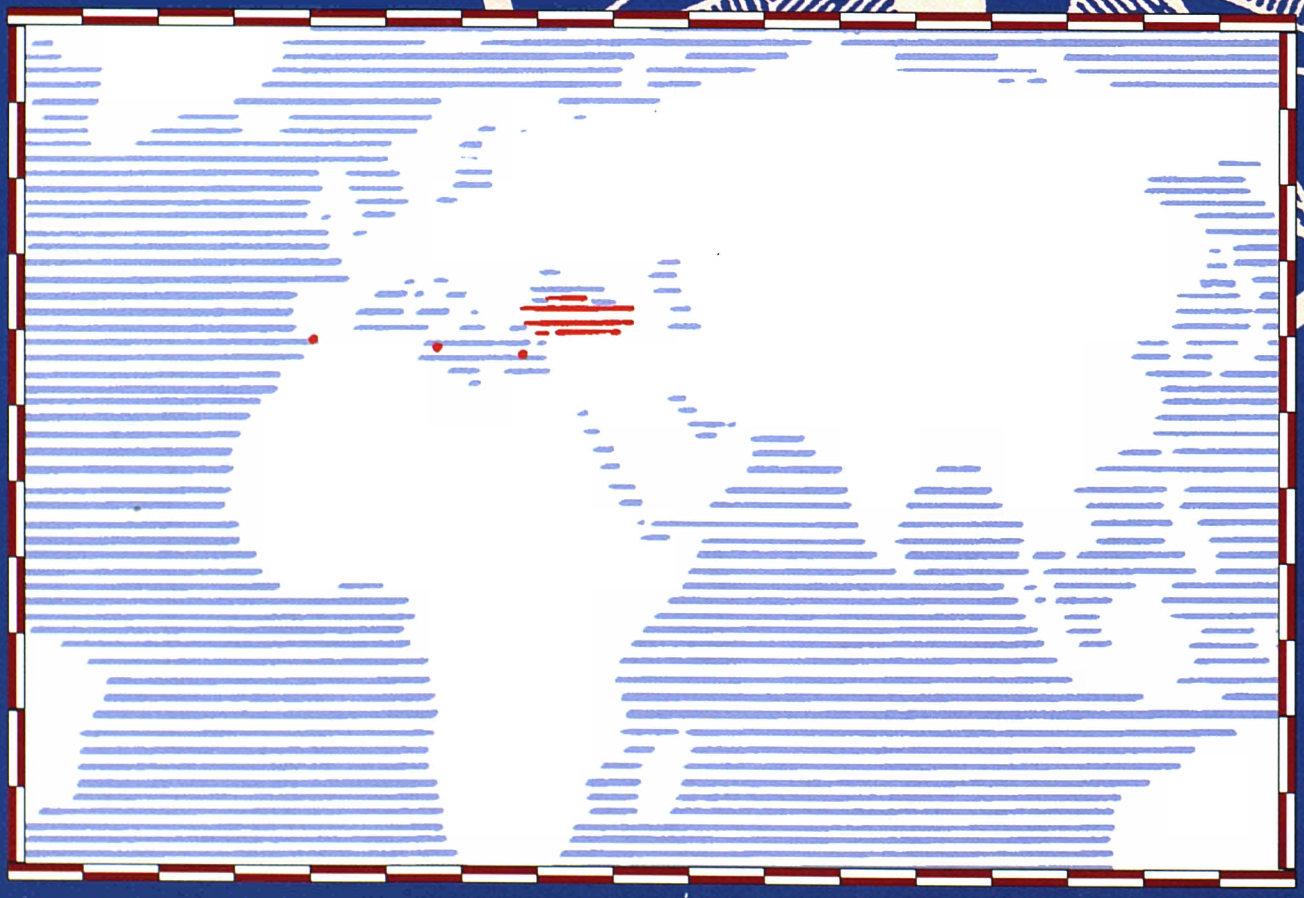
JAPAN: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	30.6	43.2	63.9	69.0	72.8	73.9	5.9	6.7	1.9	5.5	1.6
Solids	15.3	10.9	9.4	4.6	4.4	4.2	-5.4	-2.5	-16.4	-3.0	-5.6
Oil	0.8	0.5	0.7	0.6	0.8	1.0	-6.5	5.7	-2.9	31.0	13.5
Natural gas	2.3	1.9	1.9	1.8	1.9	1.9	-2.6	-0.7	-0.7	4.5	1.1
Nuclear	5.1	21.5	43.9	52.7	55.6	58.2	27.0	12.6	4.7	5.5	4.6
Hydro	7.1	7.6	7.0	7.7	8.4	7.1	1.1	-1.5	2.5	9.2	-15.3
Geothermal	0.1	0.8	1.2	1.5	1.5	1.5	44.2	7.4	5.9	1.8	0.8
Biomass	0.0	0.0	0.0	0.0	0.1	0.1	-	-	-	44.3	29.2
Net Imports	319.6	319.3	311.9	370.0	377.2	382.2	0.0	-0.4	4.4	1.9	1.3
Solids	45.7	47.5	61.1	68.9	72.0	71.0	0.7	4.3	3.1	4.6	-1.4
Oil	269.4	252.3	217.1	259.5	260.6	265.6	-1.1	-2.5	4.6	0.4	1.9
Crude oil	*244.5*	*223.0*	*168.9*	*198.5*	*210.6*	*218.0*	*-1.5*	*-4.5*	*4.1*	*6.1*	*3.5*
Oil products	*25.0*	*29.2*	*48.2*	*60.9*	*50.0*	*47.6*	*2.6*	*8.7*	*6.1*	*-17.9*	*-4.9*
Natural gas	4.5	19.5	33.8	41.7	44.5	45.7	27.7	9.6	5.4	6.9	2.5
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Gross Inland Consumption	325.6	347.1	366.3	432.6	442.8	451.1	1.1	0.9	4.2	2.4	1.9
Solids	61.5	59.6	69.0	73.9	76.6	75.3	-0.5	2.5	1.7	3.7	-1.8
Oil	245.0	236.2	209.8	253.5	254.1	261.6	-0.6	-2.0	4.8	0.2	3.0
Natural gas	6.7	21.5	35.5	43.3	46.5	47.3	21.4	8.7	5.1	7.5	1.6
Other *(1)*	12.3	29.9	52.0	61.9	65.6	66.9	15.9	9.7	4.5	5.9	2.0
Electricity Generation in TWh	457.0	572.5	671.1	850.7	880.0	888.2	3.8	2.7	6.1	3.4	0.9
Nuclear	19.7	82.6	168.3	202.3	213.5	223.3	27.0	12.6	4.7	5.5	4.6
Hydro	82.7	88.3	80.8	89.3	97.5	82.5	1.1	-1.5	2.5	9.2	-15.3
Thermal	354.6	401.6	422.0	559.2	569.0	582.4	2.1	0.8	7.3	1.8	2.4
Generation Capacity in GWe	104.2	143.7	173.7	194.7	200.0	na	5.5	3.2	2.9	2.7	na
Nuclear	3.9	15.7	25.8	31.6	33.4	na	26.1	8.7	5.2	5.6	na
Hydro	23.5	29.8	35.7	37.8	39.1	na	4.0	3.1	1.5	3.4	na
Thermal	76.8	98.3	112.2	125.3	127.5	na	4.2	2.2	2.8	1.7	na
Average Load Factor in %	50.1	45.5	44.1	49.9	50.2	na	-1.6	-0.5	3.1	0.7	na
Fuel Inputs for Thermal Power Generation	81.1	87.2	89.3	111.0	111.5	107.5	1.2	0.4	5.6	0.4	-3.6
Solids	11.5	10.5	20.8	23.8	25.1	25.7	-1.5	12.0	3.4	5.6	2.6
Oil	66.1	60.3	41.0	54.0	51.0	46.2	-1.5	-6.2	7.1	-5.4	-9.6
Gas	3.3	15.6	26.3	31.8	33.8	34.1	29.4	9.1	4.9	6.4	0.7
Geothermal	0.1	0.8	1.2	1.5	1.5	1.5	44.2	7.4	5.9	1.8	0.8
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Average Thermal Efficiency in %	37.6	39.6	40.6	43.3	43.9	46.6	0.9	0.4	1.6	1.3	6.2
Non-Energy Uses	7.7	8.3	8.3	9.0	8.8	8.8	1.1	0.0	2.0	-2.3	0.8
Total Final Energy Demand	241.1	240.6	245.9	290.7	300.2	310.6	0.0	0.4	4.3	3.3	3.5
Solids	39.0	36.7	33.3	37.5	36.5	35.7	-1.0	-1.6	3.0	-2.8	-2.1
Oil	159.3	150.0	148.8	173.0	180.2	189.7	-1.0	-0.1	3.8	4.1	5.3
Gas	7.5	9.7	12.4	14.8	16.0	16.9	4.4	4.2	4.5	8.4	5.2
Electricity	35.2	44.1	51.2	65.2	67.3	68.0	3.8	2.5	6.2	3.2	1.0
Heat	0.0	0.1	0.1	0.2	0.2	0.3	14.8	5.5	9.5	16.3	9.2
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO2 Emissions in Mt of CO2											
Total	932	906	905	1067	1090	1105	-0.5	0.0	4.2	2.1	1.5
Excluding Bunkers and Air Transport	923	894	888	1044	1066	1081	-0.5	-0.1	4.1	2.0	1.4
Indicators											
Population (Million)	110.2	116.8	121.5	123.5	123.9	124.3	1.0	0.7	0.4	0.3	0.3
GDP (Index 1985 = 100)	41.9	75.0	102.6	125.0	130.6	134.6	10.2	5.4	5.1	4.4	3.1
Gross Inl. Consumption/GDP (toe/1985 MECU)	438	261	201	195	191	189	-8.3	-4.2	-0.8	-2.0	-1.2
Gross Inl. Consumption/Capita (toe/inhabitant)	2.96	2.97	3.02	3.50	3.57	3.63	0.1	0.2	3.8	2.0	1.5
Electricity Generated/Capita (kWh/inhabitant)	4148	4901	5524	6886	7101	7144	2.8	2.0	5.7	3.1	0.6
CO2 Emissions/Capita (t of CO2/inhabitant)	8.94	8.06	7.59	8.77	8.93	9.03	-1.7	-1.0	3.7	1.9	1.1
Import Dependency (%)	93.3	89.0	83.8	84.5	84.1	83.7	-0.8	-1.0	0.2	-0.5	-0.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PART VII

MEDITERRANEAN



MEDITERRANEAN

This region comprises Turkey plus three small countries: Cyprus, Gibraltar and Malta. Given the size of its economy and population, Turkey dominates energy developments in this region. Indeed, in 1992, it accounted for 98% of population and 93% of GDP.

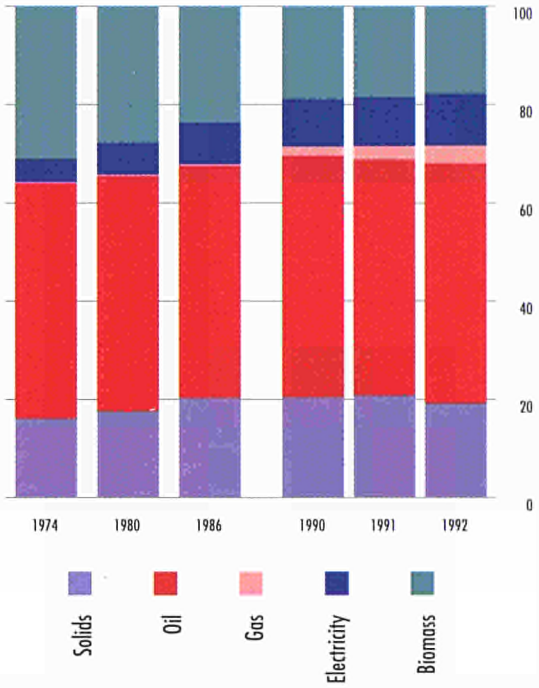
Final energy demand has steadily increased since 1974 at about 4% per year on average. Solid fuels consumption has increased at an annual average of almost 6% to 1991, followed by a 5% drop in 1992. Oil demand doubled from 1974 to 1990 and, since then, it increased again to 1992 (2% per year on average). The penetration of gas becomes more significant from 1990, when its use doubled in two years. After gas, electricity is the fastest growing fuel in end-use sectors (with demand rising almost five fold in the period). The third most important fuel is biomass but its consumption has been relatively stable. The shares of each fuel in total final demand are: 49% for oil; 19% for solids; 18% for biomass; 11% for electricity; and 3% for gas.

Gross inland consumption in the Mediterranean follows close the evolution of final demand, with an average annual increase of 4.5% in the period. From 1974 to 1992, solids increased by almost 7% per year, oil almost at 4% per year and natural gas by ten fold but only since 1986. Consumption of renewable energy sources had a continuous growth by 2% per year in the period. In 1992, the shares of these fuels in gross consumption were: Oil with 45%; Solids with 30%; Renewable sources with 18%; and Natural gas with 7%.

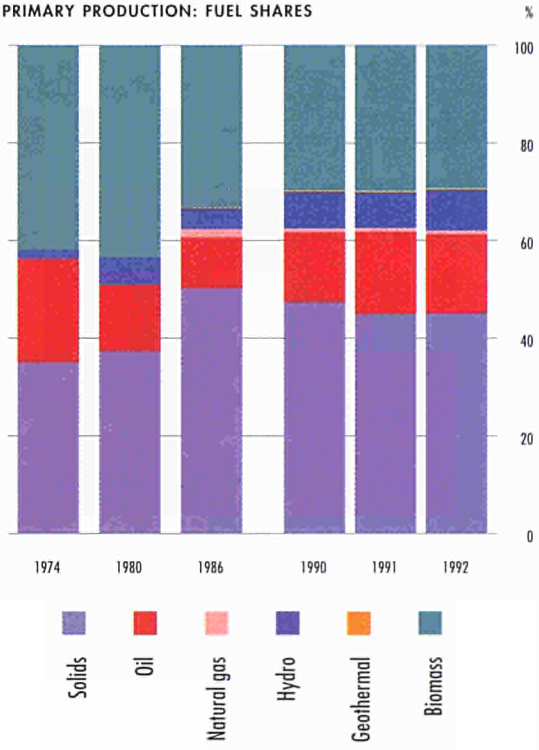
Domestic **energy production** in the Mediterranean occurs practically only in Turkey. Its total level has been steadily increasing in the period by 3% per year on average. In 1992, solid fuels accounted for 45% of total, renewable sources accounted for 38% (biomass for 29%), oil for 16% and natural gas for under 1%. There is no nuclear energy. Hydro power production in 1992 was almost eight times that in 1974.

The Mediterranean is increasingly a **net importer of energy,** with the degree of dependency growing from 42% in 1974 to 53% in 1992. This is due to the fact that Turkey passed from 39% dependency in 1974 to 50% in 1992. The other three countries of the region were almost 100%

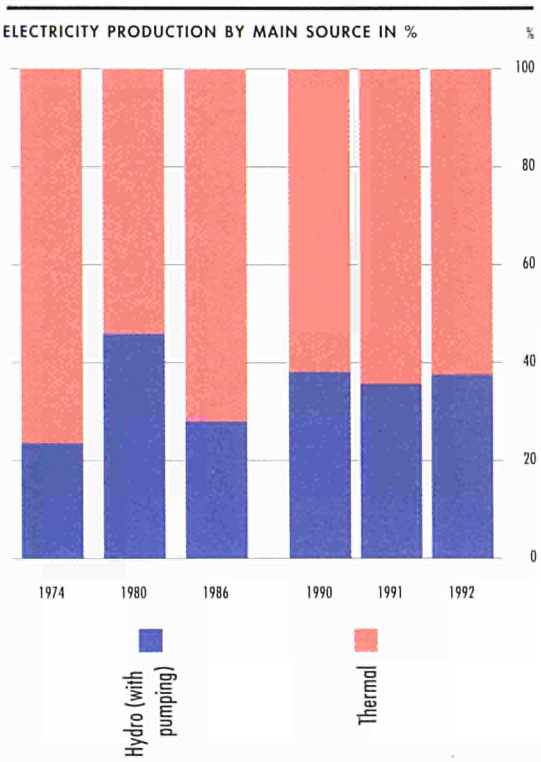
FINAL ENERGY DEMAND: FUEL SHARES



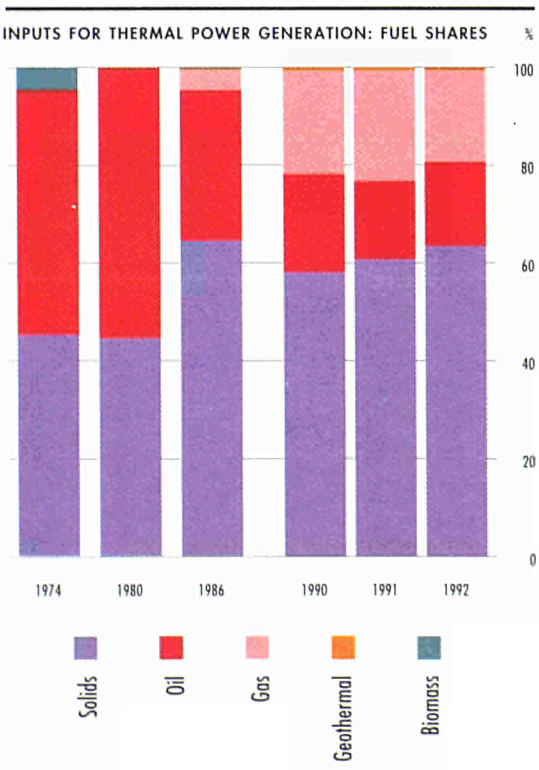
PRIMARY PRODUCTION: FUEL SHARES



dependent on foreign supplies. However, this region is practically self-sufficient in electricity. After 1986 there are relatively massive imports of natural gas to Turkey, mainly destined for power generation.



Electricity generation in the region as a whole is based on thermal units (62% of total in 1992) and hydro power. Total generation has increased steadily in the period by more than 9% per year on average. In this period, thermal and hydro power production increased 8% and 12% per year respectively. However, this picture is once again conditioned by the Turkish electricity system. Indeed, in the three other countries, electricity generation is all based on thermal units, and has in fact grown slower (about 7%) than in Turkey.



The increment of **inputs for thermal generation** of electricity have been mainly satisfied by solids and gas. Oil consumption, peaked in 1986 and show a certain decline to 1992. In 1992, the shares of fossil fuels in total inputs were: Solids with 64%; Gas with 19%; and oil with 17%. This means that gas has somewhat replaced oil for power generation and became more important than oil after 1990. Geothermal has only a minor participation. The average thermal efficiency has improved from 29% in 1974 to 33% in 1992.

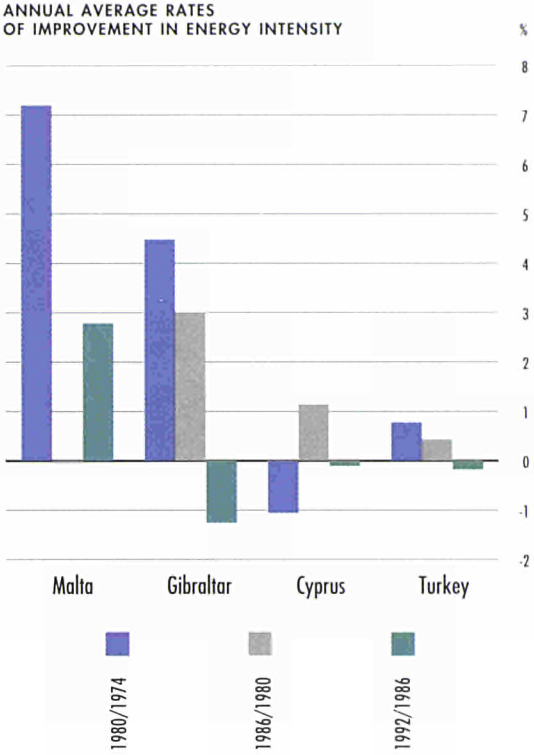
In terms of **energy intensity**, while Turkey presents a ratio almost double that of the European Union, the other countries of the region have much lower intensities. In their case, although they are slightly more intensive than Europe, they present a similar downward trend.

Energy consumption per capita on average has increased in the period (2.2% per year) but, in 1992, was still 72% below that of the European Union. However, mainly as a result of a higher GDP per capita in Cyprus, Gibraltar and Malta, these countries present a consumption per capita more than double that of Turkey. In addition, per capita consumption has increased much faster (4.3% per year) elsewhere in the region than in Turkey.

CO2 emissions per capita have increased in the period by 2.4% per year. In Turkey they increased by 2.3% per year, while in the other countries they grew at almost 5% per year. In 1992 compared to the European Union, Turkey had 70% less emissions per capita and the other countries were only 22% below.

The following tables summarise the energy situation for the Mediterranean and Turkey.

ANNUAL AVERAGE RATES OF IMPROVEMENT IN ENERGY INTENSITY



MAIN INDICATORS: COMPARISON

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
GDP/Capita (1985 ECU/inhabitant)												
Mediterranean	1101	1292	1528	1731	1699	1743	2.7	2.8	3.2	-1.8	2.6	2.6
Turkey	1064	1234	1462	1645	1612	1651	2.5	2.9	3.0	-2.0	2.4	2.5
Other	2595	3939	4805	6170	6230	6587	7.2	3.4	6.4	1.0	5.7	5.3
European Union	8462	9556	10397	11578	11645	11722	2.0	1.4	2.7	0.6	0.7	1.8
Gross Inl. Consumption/GDP (toe/1985 MECU)												
Mediterranean	598	567	552	560	566	555	-0.9	-0.4	0.4	1.0	-1.9	-0.4
Turkey	610	581	566	577	583	572	-0.8	-0.4	0.5	1.0	-1.8	-0.4
Other	395	359	341	326	336	329	-1.6	-0.8	-1.2	3.1	-2.0	-1.0
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inl. Consumption/Capita (toe/inhabitant)												
Mediterranean	0.66	0.73	0.84	0.97	0.96	0.97	1.8	2.4	3.5	-0.8	0.7	2.2
Turkey	0.65	0.72	0.83	0.95	0.94	0.94	1.7	2.4	3.5	-1.0	0.6	2.1
Other	1.02	1.41	1.64	2.01	2.09	2.17	5.5	2.5	5.2	4.1	3.6	4.3
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9	0.4
CO2 Emissions/Capita (t of CO2/inhabitant)												
Mediterranean	1.79	2.00	2.37	2.69	2.68	2.73	1.8	2.9	3.1	-0.3	1.8	2.4
Turkey	1.77	1.95	2.32	2.62	2.61	2.65	1.7	2.9	3.1	-0.6	1.7	2.3
Other	2.93	4.14	4.83	6.00	6.35	6.75	5.9	2.6	5.6	5.9	6.3	4.7
European Union	9.33	9.40	8.65	8.73	8.84	8.65	0.1	-1.4	0.2	1.3	-2.2	-0.4

MEDITERRANEAN: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	15.98	17.61	23.70	26.49	26.53	27.03	1.6	5.1	2.8	0.1	1.9
Solids	5.59	6.57	11.92	12.55	11.95	12.21	2.7	10.4	1.3	-4.8	2.1
Oil	3.38	2.38	2.45	3.79	4.46	4.37	-5.7	0.5	11.6	17.6	-2.0
Natural gas	0.00	0.00	0.38	0.17	0.17	0.16	-	-	-17.5	-4.2	-2.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.29	0.98	1.02	1.99	1.95	2.28	22.5	0.8	18.2	-2.0	17.1
Geothermal	0.00	0.00	0.04	0.07	0.07	0.06	0.0	0.0	16.2	1.3	-13.6
Biomass	6.72	7.68	7.90	7.91	7.93	7.94	2.3	0.5	0.0	0.1	0.2
Net Imports	11.23	15.91	21.07	30.46	28.50	30.87	6.0	4.8	9.7	-6.5	8.3
Solids	0.10	0.71	2.06	4.42	4.83	4.44	37.4	19.6	21.0	9.3	-7.9
Oil	11.13	15.09	18.94	23.43	20.32	22.79	5.2	3.9	5.5	-13.2	12.1
Crude oil	*10.69*	*11.30*	*17.92*	*21.14*	*18.79*	*20.66*	*0.9*	*8.0*	*4.2*	*-11.1*	*9.9*
Oil products	*0.44*	*3.79*	*1.02*	*2.29*	*1.53*	*2.13*	*43.4*	*-19.7*	*22.5*	*-33.2*	*38.9*
Natural gas	0.00	0.00	0.00	2.68	3.32	3.65	-	-	-	23.9	10.0
Electricity	0.00	0.12	0.07	-0.06	0.02	-0.01	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Consumption	26.30	33.28	44.13	55.39	56.21	57.95	4.0	4.8	5.8	1.5	3.1
Solids	5.59	7.57	14.04	17.24	17.77	17.54	5.2	10.8	5.3	3.0	-1.3
Oil	13.70	16.94	20.69	25.38	24.99	26.32	3.6	3.4	5.2	-1.5	5.3
Natural gas	0.00	0.00	0.38	2.85	3.49	3.81	0.0	0.0	65.9	22.2	9.4
Other *(1)*	7.01	8.78	9.02	9.91	9.97	10.27	3.8	0.5	2.4	0.6	3.1
Electricity Generation in TWh	14.35	24.76	42.03	60.70	63.51	70.71	9.5	9.2	9.6	4.6	11.4
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	3.36	11.35	11.87	23.15	22.68	26.57	22.5	0.8	18.2	-2.0	17.1
Thermal	11.00	13.41	30.16	37.55	40.82	44.15	3.4	14.5	5.6	8.7	8.1
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	3.22	3.59	8.32	10.11	10.48	11.45	1.8	15.0	5.0	3.6	9.2
Solids	1.46	1.60	5.38	5.88	6.37	7.28	1.5	22.4	2.2	8.3	14.3
Oil	1.62	2.00	2.57	2.04	1.68	1.97	3.5	4.3	-5.6	-17.5	16.8
Gas	0.00	0.00	0.34	2.13	2.36	2.14	-	-	58.3	11.0	-9.3
Geothermal	0.00	0.00	0.04	0.07	0.07	0.06	-	-	16.2	1.3	-13.6
Biomass	0.14	0	0	0	0	0	-100.0	-	-	-	-
Average Thermal Efficiency in %	29.4	32.1	31.2	31.9	33.5	33.2	1.5	-0.5	0.6	4.9	-1.0
Non-Energy Uses	0.42	0.53	1.13	1.14	1.30	1.18	3.8	13.6	0.4	14.0	-9.7
Total Final Energy Demand	21.17	27.60	33.19	42.00	42.69	44.20	4.5	3.1	6.1	1.6	3.6
Solids	3.48	4.84	6.71	8.57	8.88	8.43	5.6	5.6	6.3	3.7	-5.1
Oil	10.07	13.23	15.69	20.69	20.47	21.59	4.7	2.9	7.2	-1.1	5.5
Gas	0.04	0.04	0.07	0.72	1.12	1.54	0.7	10.6	78.2	54.8	37.5
Electricity	1.00	1.81	2.83	4.10	4.29	4.70	10.3	7.7	9.8	4.5	9.6
Heat	0	0	0	0	0	0	-	-	-	-	-
Biomass	6.58	7.68	7.90	7.91	7.93	7.94	2.6	0.5	0.0	0.1	0.2
CO2 Emissions in Mt of CO2											
Total	71.8	90.9	124.2	153.5	156.6	163.3	4.0	5.3	5.4	2.0	4.3
Excluding Bunkers and Air Transport	70.9	90.0	122.7	151.0	153.9	160.3	4.1	5.3	5.3	1.9	4.1
Indicators											
Population (Million)	40.0	45.5	52.3	57.2	58.5	59.9	2.2	2.4	2.2	2.3	2.4
GDP (Index 1985 = 100)	59.5	79.4	108.0	133.7	134.3	141.1	4.9	5.3	5.5	0.5	5.1
Gross Inl. Consumption/GDP (toe/1985 MECU)	598	567	552	560	566	555	-0.9	-0.4	0.4	1.0	-1.9
Gross Inl. Consumption/Capita (toe/inhabitant)	0.66	0.73	0.84	0.97	0.96	0.97	1.8	2.4	3.5	-0.8	0.7
Electricity Generated/Capita (kWh/inhabitant)	359	545	804	1062	1086	1181	7.2	6.7	7.2	2.2	8.7
CO2 Emissions/Capita (t of CO2/inhabitant)	1.79	2.00	2.37	2.69	2.68	2.73	1.8	2.9	3.1	-0.3	1.8
Import Dependency (%)	42.1	47.6	47.1	54.4	50.1	52.7	2.1	-0.2	3.7	-7.9	5.2

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

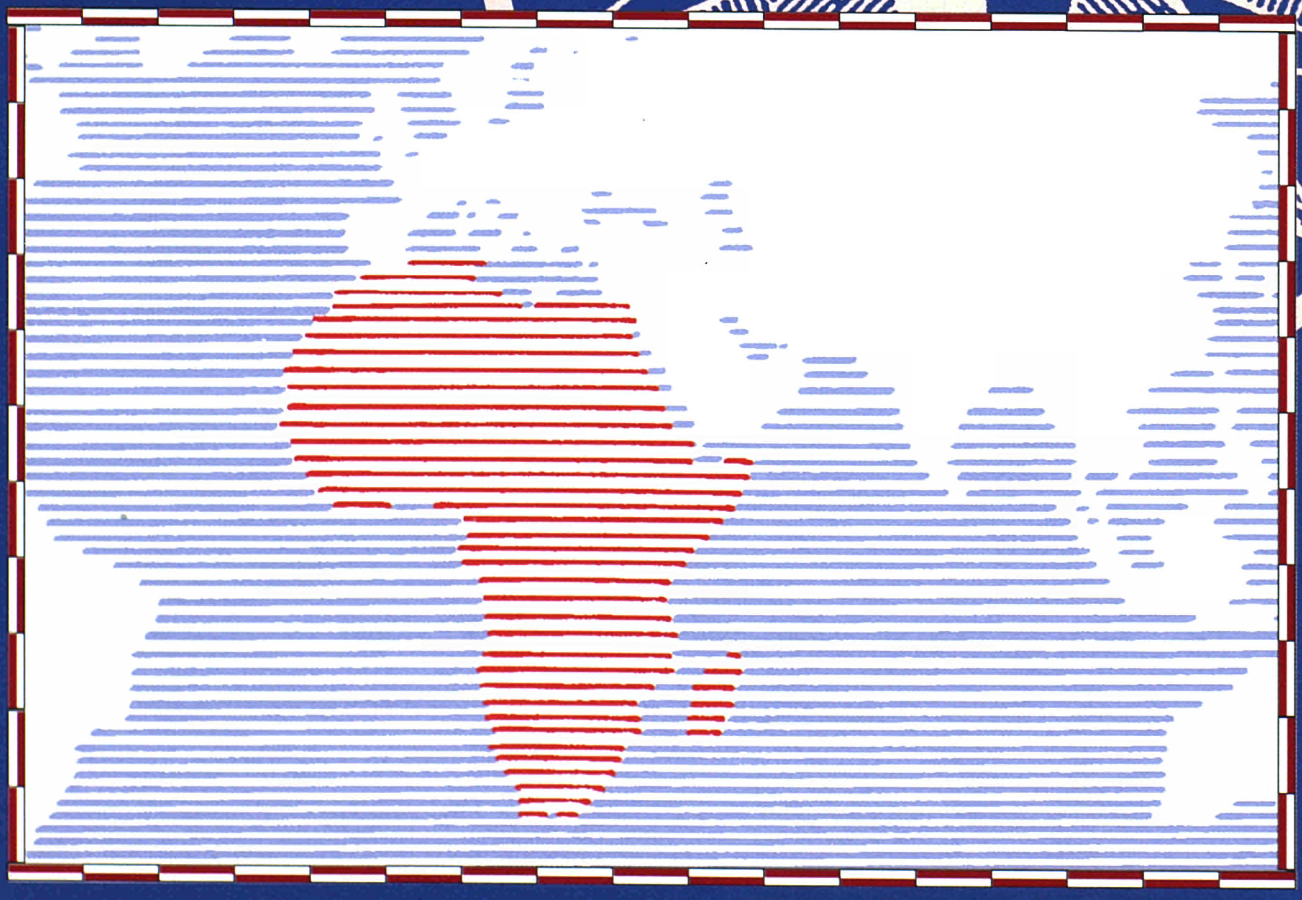
TURKEY: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	15.98	17.61	23.69	26.49	26.52	27.02	1.6	5.1	2.8	0.1	1.9
Solids	5.59	6.57	11.92	12.55	11.95	12.21	2.7	10.4	1.3	-4.8	2.1
Oil	3.38	2.38	2.45	3.79	4.46	4.37	-5.7	0.5	11.6	17.6	-2.0
Natural gas	0.00	0.00	0.38	0.17	0.17	0.16	-	-	-17.5	-4.2	-2.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.29	0.98	1.02	1.99	1.95	2.28	22.5	0.8	18.2	-2.0	17.1
Geothermal	0.00	0.00	0.04	0.07	0.07	0.06	0.0	0.0	16.2	1.3	-13.6
Biomass	6.72	7.68	7.89	7.91	7.92	7.93	2.3	0.5	0.0	0.1	0.2
Net Imports	9.95	14.34	19.12	27.72	25.70	27.95	6.3	4.9	9.7	-7.3	8.8
Solids	0.10	0.71	1.94	4.17	4.58	4.20	37.4	18.4	21.1	9.9	-8.4
Oil	9.85	13.52	17.11	20.93	17.77	20.11	5.4	4.0	5.2	-15.1	13.2
Crude oil	*10.18*	*10.72*	*17.36*	*20.50*	*18.02*	*19.74*	*0.9*	*8.4*	*4.3*	*-12.1*	*9.6*
Oil products	*-0.33*	*2.80*	*-0.24*	*0.43*	*-0.25*	*0.37*	-	-	-	-	-
Natural gas	0.00	0.00	0.00	2.68	3.32	3.65	-	-	-	23.9	10.0
Electricity	0.00	0.12	0.07	-0.06	0.02	-0.01	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	25.32	31.89	42.43	53.21	53.91	55.53	3.9	4.9	5.8	1.3	3.0
Solids	5.59	7.57	13.92	17.00	17.52	17.29	5.2	10.7	5.1	3.1	-1.3
Oil	12.73	15.55	19.11	23.46	22.94	24.16	3.4	3.5	5.3	-2.2	5.3
Natural gas	0.00	0.00	0.38	2.85	3.49	3.81	0.0	0.0	65.9	22.2	9.4
Other *(1)*	7.00	8.77	9.02	9.90	9.96	10.26	3.8	0.5	2.4	0.6	3.1
Electricity Generation in TWh	13.27	23.14	39.70	57.54	60.25	67.34	9.7	9.4	9.7	4.7	11.8
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	3.36	11.35	11.87	23.15	22.68	26.57	22.5	0.8	18.2	-2.0	17.1
Thermal	9.92	11.79	27.82	34.40	37.56	40.77	2.9	15.4	5.4	9.2	8.5
Generation Capacity in GWe	3.73	5.12	10.71	16.32	16.94	na	5.4	13.1	11.1	3.8	-
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.44	2.13	3.88	6.76	6.84	na	6.7	10.5	14.9	1.2	-
Thermal	2.28	2.99	6.84	9.55	10.09	na	4.6	14.8	8.7	5.7	-
Average Load Factor in %	40.65	51.60	42.30	40.26	40.61	na	4.1	-3.3	-1.2	0.9	-
Fuel Inputs for Thermal Power Generation	2.87	3.08	7.65	9.19	9.53	10.47	1.2	16.4	4.7	3.7	9.9
Solids	1.46	1.60	5.30	5.69	6.18	7.09	1.5	22.1	1.8	8.6	14.7
Oil	1.27	1.48	1.97	1.30	0.91	1.18	2.6	4.9	-10.0	-29.5	28.7
Gas	0.00	0.00	0.34	2.13	2.36	2.14	-	-	58.3	11.0	-9.3
Geothermal	0.00	0.00	0.04	0.07	0.07	0.06	-	-	16.2	1.3	-13.6
Biomass	0.14	0	0	0	0	0	-100.0	-	-	-	-
Average Thermal Efficiency in %	29.71	32.94	31.30	32.20	33.91	33.49	1.7	-0.8	0.7	5.3	-1.2
Non-Energy Uses	0.39	0.49	1.08	1.06	1.26	1.14	3.8	14.0	-0.5	19.3	-9.8
Total Final Energy Demand	20.52	26.66	32.08	40.64	41.18	42.55	4.5	3.1	6.1	1.3	3.3
Solids	3.48	4.84	6.67	8.51	8.82	8.37	5.6	5.5	6.3	3.7	-5.1
Oil	9.50	12.42	14.80	19.63	19.27	20.26	4.6	3.0	7.3	-1.8	5.1
Gas	0.04	0.04	0.07	0.72	1.12	1.54	0.7	10.6	78.2	54.8	37.5
Electricity	0.92	1.68	2.65	3.87	4.04	4.45	10.6	7.9	9.9	4.6	10.0
Heat	0	0	0	0	0	0	-	-	-	-	-
Biomass	6.57	7.68	7.89	7.91	7.92	7.93	2.6	0.5	0.0	0.1	0.2
CO2 Emissions in Mt of CO2											
Total	69.0	86.8	119.2	147.0	149.6	155.8	3.9	5.4	5.4	1.8	4.1
Excluding Bunkers and Air Transport	68.4	86.4	118.3	145.5	148.0	154.0	4.0	5.4	5.3	1.8	4.0
Indicators											
Population (Million)	39.0	44.5	51.3	56.1	57.4	58.8	2.2	2.4	2.3	2.4	2.4
GDP (Index 1985 = 100)	60.0	79.3	108.3	133.3	133.7	140.3	4.7	5.3	5.3	0.3	4.9
Gross Inl. Consumption/GDP (toe/1985 MECU)	610	581	566	577	583	572	-0.8	-0.4	0.5	1.0	-1.8
Gross Inl. Consumption/Capita (toe/inhabitant)	0.65	0.72	0.83	0.95	0.94	0.94	1.7	2.4	3.5	-1.0	0.6
Electricity Generated/Capita (kWh/inhabitant)	340	520	774	1026	1050	1146	7.4	6.9	7.3	2.3	9.1
CO2 Emissions/Capita (t of CO2/inhabitant)	1.77	1.95	2.32	2.62	2.61	2.65	1.7	2.9	3.1	-0.6	1.7
Import Dependency (%)	39.2	45.0	44.8	52.0	47.5	50.2	2.3	-0.1	3.8	-8.5	5.7

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PART VIII

AFRICA



PART VIII

AFRICA

This is a vast continent with a natural geographic separation (the Sahara desert) between the North along the Mediterranean sea and all other countries. Besides geography, there are other, more profound differences in terms of energy production, trade and use, as well as economic structures and stage of development. Moreover, there are special links between the European Union and North African countries, particularly concerning natural gas and oil supplies. The table below shows some average energy and economic indicators for the two African regions and for the European Union.

The following tables summarise the energy situation for the whole of the African continent.

MAIN INDICATORS: COMPARISON

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
AFRICA	na	na	544	545	541	552	na	na	0.0	-0.7	2.0	na
North Africa	143	247	341	373	384	406	9.6	5.5	2.2	3.0	5.8	6.0
Other Africa	na	na	666	640	626	629	na	na	-1.0	-2.2	0.5	na
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inl. Consumption/Capita (toe/inhabitant)												
AFRICA	0.43	0.48	0.51	0.52	0.50	0.52	1.9	1.1	0.2	-2.7	2.9	1.1
North Africa	0.30	0.50	0.65	0.68	0.69	0.70	8.6	4.7	1.1	0.2	2.4	4.8
Other Africa	0.46	0.48	0.48	0.48	0.46	0.48	0.6	0.2	-0.1	-3.5	2.8	0.2
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9	0.4
GDP/Capita (thousand 1985 ECU/inhabitant)												
AFRICA	na	na	0.94	0.95	0.93	0.94	na	na	0.1	-2.0	0.9	na
North Africa	2.12	2.01	1.92	1.83	1.79	1.73	-0.9	-0.8	-1.1	-2.7	-3.2	-1.1
Other Africa	na	na	0.72	0.75	0.74	0.76	na	na	0.9	-1.4	2.3	na
European Union	8.46	9.56	10.40	11.58	11.64	11.72	2.0	1.4	2.7	0.6	0.7	1.8

AFRICA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	396.5	492.0	529.0	622.3	636.3	655.0	3.7	1.2	4.1	2.2	2.9
Solids	42.6	72.1	107.0	115.1	112.9	116.3	9.2	6.8	1.8	-1.9	3.0
Oil	274.2	310.1	268.6	327.9	338.3	350.2	2.1	-2.4	5.1	3.2	3.5
Natural gas	8.7	20.5	44.5	60.2	65.6	68.2	15.4	13.8	7.9	8.9	3.9
Nuclear	0	0	2.3	2.2	2.4	2.4	-	-	-1.0	8.2	1.6
Hydro	2.9	5.2	4.6	4.7	5.1	5.2	10.4	-2.3	0.7	9.4	0.3
Geothermal	0.0	0.0	0.4	0.3	0.3	0.0	0.0	74.5	-2.1	-7.1	-
Biomass	68.1	84.1	101.7	111.9	111.6	112.7	3.6	3.2	2.4	-0.3	1.0
Net Imports	-226.8	-263.5	-230.7	-289.3	-302.9	-318.3	2.5	-2.2	5.8	4.7	5.1
Solids	-0.7	-18.5	-27.9	-27.0	-26.7	-27.2	72.8	7.1	-0.8	-1.0	1.8
Oil	-221.3	-236.9	-182.1	-232.6	-242.7	-256.0	1.1	-4.3	6.3	4.3	5.5
Crude oil	*-224.0*	*-236.0*	*-166.3*	*-210.4*	*-220.4*	*-229.3*	*0.9*	*-5.7*	*6.0*	*4.8*	*4.0*
Oil products	*2.7*	*-0.9*	*-15.8*	*-22.2*	*-22.3*	*-26.7*	-	*61.1*	*9.0*	*0.4*	*19.4*
Natural gas	-5.0	-8.2	-20.6	-29.6	-33.3	-34.9	8.6	16.7	9.5	12.4	4.8
Electricity	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-	-	-	80.2	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	161.6	221.6	288.8	325.7	328.2	336.7	5.4	4.5	3.1	0.8	2.6
Solids	41.1	52.7	76.1	87.7	87.9	89.1	4.2	6.3	3.6	0.3	1.4
Oil	45.6	67.2	79.9	88.4	88.8	94.3	6.7	2.9	2.6	0.4	6.2
Natural gas	3.7	12.4	23.9	30.6	32.3	33.2	22.2	11.6	6.4	5.6	3.0
Other *(1)*	71.2	89.3	108.9	119.0	119.2	120.1	3.8	3.4	2.3	0.2	0.7
Electricity Generation in TWh	120.3	198.0	276.1	321.0	330.4	na	8.7	5.7	3.8	2.9	na
Nuclear	0	0	8.8	8.4	9.1	na	-	-	-1.0	8.2	na
Hydro	33.7	61.0	53.1	54.7	59.9	na	10.4	-2.3	0.7	9.5	na
Thermal	86.6	137.0	214.1	257.8	261.4	na	7.9	7.7	4.8	1.4	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	na	na	na	na	-	-	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	23.5	39.4	56.6	71.1	72.1	na	9.0	6.2	5.9	1.5	na
Solids	18.9	27.5	35.7	48.5	48.9	na	6.5	4.5	7.9	0.9	na
Oil	3.8	7.8	11.3	12.2	12.6	na	13.0	6.3	2.0	3.3	na
Gas	0.9	4.1	9.2	10.1	10.4	na	30.0	14.5	2.3	2.4	na
Geothermal	0.0	0.0	0.4	0.3	0.3	na	0.0	74.5	-2.1	-7.1	na
Biomass	0.0	0.0	0.0	0.0	0.0	na	8.9	13.2	1.2	0.0	na
Average Thermal Efficiency in %	31.7	29.9	32.5	31.2	31.2	na	-1.0	1.4	-1.1	-0.1	na
Non-Energy Uses	2.0	3.1	3.6	3.2	3.1	na	7.7	2.3	-2.6	-3.0	na
Total Final Energy Demand	133.0	172.9	209.5	233.9	235.2	na	4.5	3.3	2.8	0.6	na
Solids	18.8	18.8	19.2	19.6	20.3	na	0.0	0.4	0.5	3.4	na
Oil	36.3	52.3	62.1	71.5	70.9	na	6.3	2.9	3.6	-0.9	na
Gas	0.7	3.2	6.4	7.9	8.5	na	29.4	12.2	5.3	7.2	na
Electricity	9.2	14.5	20.0	23.1	24.1	na	8.0	5.5	3.6	4.4	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	68.1	84.0	101.7	111.8	111.6	na	3.6	3.2	2.4	-0.3	na
CO2 Emissions in Mt of CO2											
Total	281	398	502	602	609	na	6.0	3.9	4.6	1.3	na
Excluding Bunkers and Air Transport	272	385	489	587	595	na	5.9	4.0	4.7	1.4	na
Indicators											
Population (Million)	377.5	475.8	561.3	628.5	650.8	648.9	3.9	2.8	2.9	3.5	-0.3
GDP (Index 1985 = 100)	na	na	101.3	114.1	115.8	116.5	na	na	3.0	1.5	0.6
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	na	544	545	541	552	na	na	0.0	-0.7	2.0
Gross Inl. Consumption/Capita (toe/inhabitant)	0.43	0.47	0.51	0.52	0.50	0.52	1.4	1.7	0.2	-2.7	2.9
Electricity Generated/Capita (kWh/inhabitant)	319	416	492	511	508	na	4.5	2.8	0.9	-0.6	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.74	0.84	0.89	0.96	0.94	na	2.0	1.1	1.7	-2.2	na
Import Dependency (%)	-135.6	-116.2	-78.5	-87.3	-90.8	-93.0	-2.5	-6.3	2.7	3.9	2.4

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

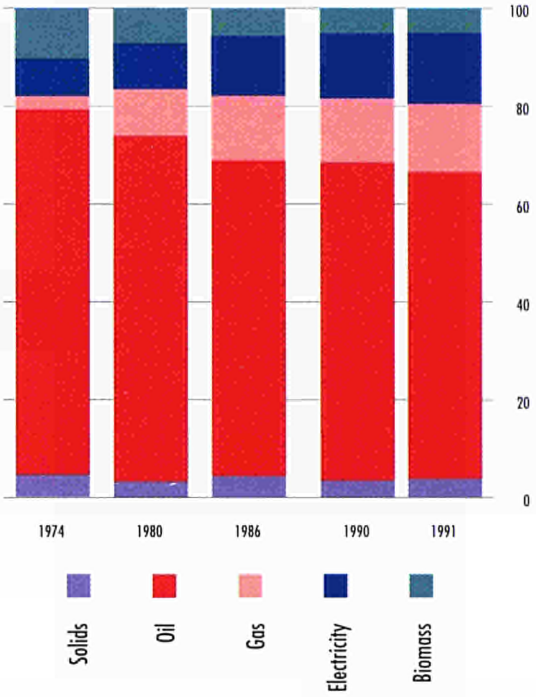
NORTH AFRICA

This region includes: Algeria, Egypt, Libya, Morocco and Tunisia. **Final energy consumption** has much increased in the period (7% per year on average), but the rate of growth has steadilyy slowed. In fact, while consumption grew by 10% per year up to 1980, it only increased by 3.9% per year in the second half of the 1980s and by 2.8% in 1991. Oil is the dominant fuel in final consumption with 63% of total in 1991 (75% in 1974). Natural gas had the fastest rate of growth (18% per year in the period) and accounted for 14% of total final demand in 1991 (2% in 1974). Electricity ranks second in rate of penetration with average growth of 11% in the period and satisfying 14% in 1991 (8% in 1974). Demand for solid fuels has increased by almost 6% per year in the period, but its share in total decreased from 5% to 4% of total. Although non-commercial fuels (biomass) have increased by almost 3% per year, their share in total final demand halved in the period (10% in 1974).

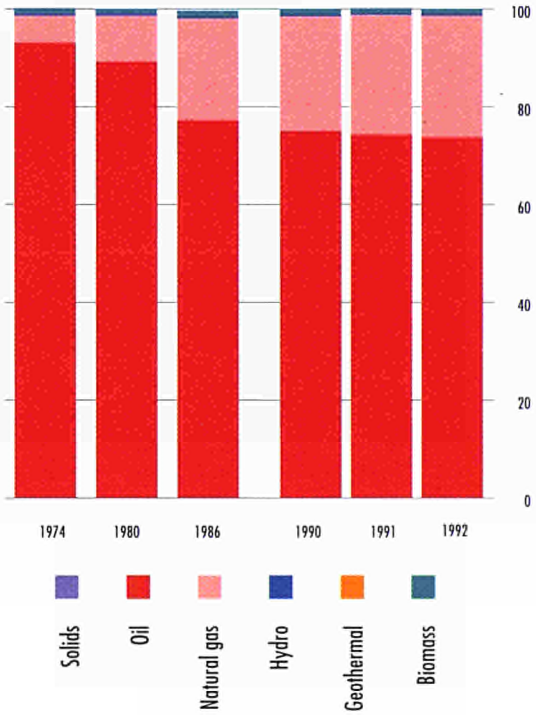
Gross inland consumption followed closely the evolution of final demand, with an average annual increase of almost 8% in the period. As for final demand, however, the highest rate of growth occurred in the 1970s with more than 11% per year. There was a general increase for all primary fuels, specially for natural gas with 13% per year average growth since 1974. This leads to a share of gas in total primary supply of 33% in 1992 (14% in 1974). In 1992, the shares of the other fossil fuels in gross consumption were: oil with 59%; and solids with 3%. renewable sources although increasing by 2.4% per year, saw their contribution to total supply drop from 10% in 1974 to 4% in 1992.

Domestic **Energy production** is dominated by oil (74% of total production in 1992), but Morocco has no indigenous production of crude oil. The evolution of crude oil production was marked by a significant drop in the first half of the 1980s. In 1992 it was only 3% higher than in 1980. Its total level has increased over the full period by 2% per year on average. The second most important fuel being produced is natural gas (25% of total in 1992), although there is no production in Morocco and only very small amounts in Tunisia. Unlike oil, the production of gas has steadily increased in the period by 12% per year on average, but also with a slowing trend. There is no nuclear energy. Hydro power production has been stable in the period. Biomass production increased by about 3% per year up to 1986, and has been stable since.

FINAL ENERGY DEMAND: FUEL SHARES

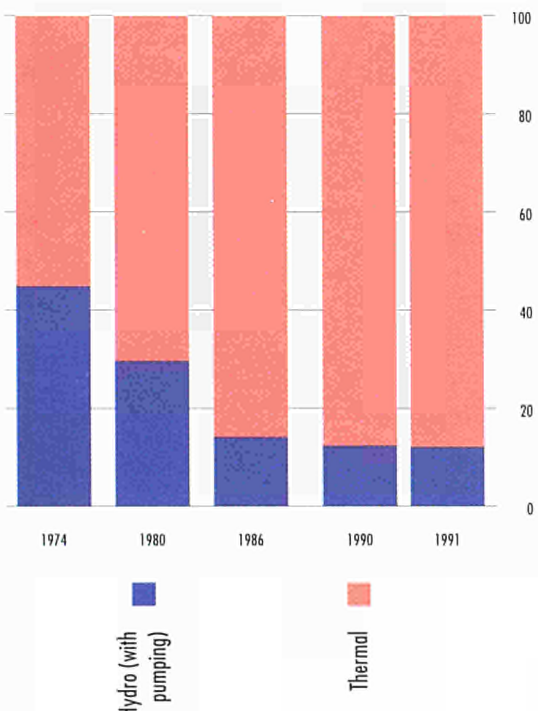


PRIMARY PRODUCTION: FUEL SHARES



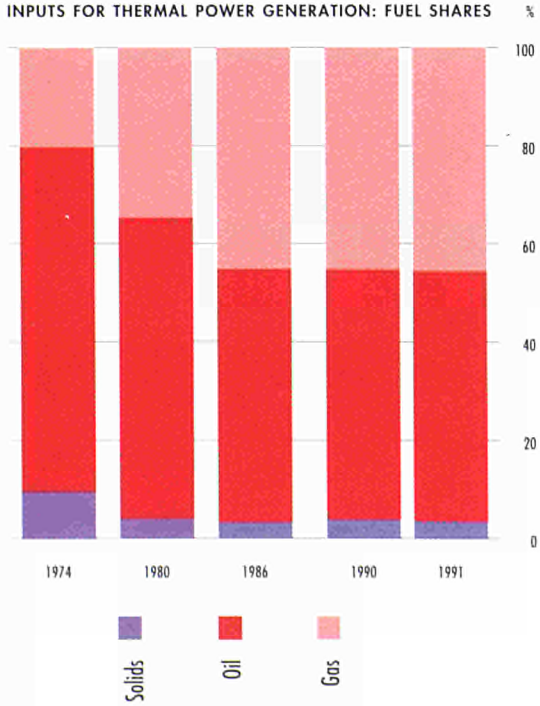
North Africa is growing as **a net exporter of energy.** However, Morocco is a net importer, with the degree of dependency relatively stable approaching 90% of its primary energy needs. Algeria is the largest North African exporter in 1992 with 49% of total exports from this region. Libya, which ranked second in 1992, was the largest exporter in 1974 with 60% of total region exports. Crude oil exports from this region in 1992 came from: Libya with 55% (61% in 1974); Algeria with 28% (38% in 1974); Egypt with 17% (0.2% in 1974). Tunisia was a small exporter of crude oil in the period (3% of regional exports in 1992). Algeria, by far the largest natural gas exporter of the region (97% of total in 1992) and Libya are the only net exporters of natural gas. Tunisia imports some small volumes of gas (0.6 Mtoe in 1992).

ELECTRICITY PRODUCTION BY MAIN SOURCE IN %



Electricity generation in the region as a whole is mainly based on thermal units (88% of total in 1991) and hydro power. Total generation has increased steadily in the period by more than 10% per year on average. In this period, thermal power production increased 13% per year. There is no nuclear energy. In Egypt hydro power accounted for 21% of total generation in 1991. On the other hand, there is no hydro power in Libya.

INPUTS FOR THERMAL POWER GENERATION: FUEL SHARES

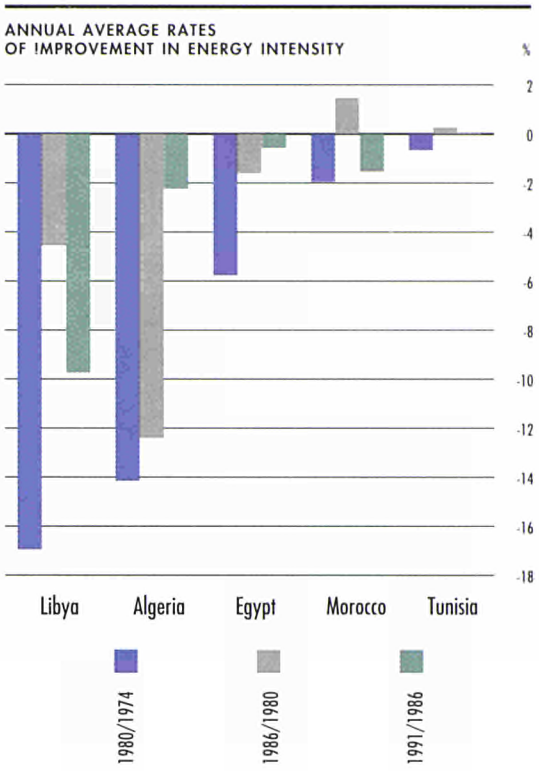


The increment of **inputs for thermal generation** of electricity have been mainly satisfied by gas and oil. Indeed, gas and oil inputs increased substantially by 17% and 9% per year in the period respectively. In 1991, the shares of fossil fuels in total inputs were: Oil with 51% (72% in 1974); Gas with 46% (19% in 1974); and solids with 3% (9% in 1974). The average thermal efficiency has improved from 27% in 1974 to 37% in 1991.

Energy intensity has increased markedly in the period by 6% per year on average. But, while Libya increased its intensity by more than 10% per year, Morocco had an increase in the 1970s but shows a slight downward trend since 1980. Intensity in Tunisia has been virtually stable.

Energy consumption per capita on average has increased almost 5% per year in the period but, in 1992, was still 80% below that of the European Union. In general, this ratio correlates with GDP per capita in each country. However, while consumption per capita has been increasing in all countries, GDP per capita has been declining by about 1% per year. This drop is due to Libya and Algeria, which had 7% and 3% per year losses in GDP per capita, while Egypt and Tunisia had overall increases of more than 2% per year in the period. Morocco increased its wealth per capita by slightly more than 1% per year. However, after 1990 there is a general drop in all countries except Tunisia.

The following tables summarise the energy situation for the North Africa and for each country of the region.



NORTH AFRICA: MAIN INDICATORS

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
North Africa	143	247	341	373	384	406	9.6	5.5	2.2	3.0	5.8	6.0
Algeria	76	169	340	349	381	403	14.2	12.4	0.7	8.9	6.0	9.7
Egypt	244	343	377	391	389	413	5.8	1.6	0.9	-0.5	6.3	3.0
Libya	84	216	283	423	450	514	17.0	4.6	10.6	6.5	14.1	10.6
Morocco	271	304	278	301	301	295	2.0	-1.5	2.0	-0.2	-1.9	0.5
Tunisia	399	416	409	424	408	404	0.7	-0.3	0.9	-3.8	-0.9	0.1
Gross Inland Consumption per Capita (toe/inhabitant)												
North Africa	0.30	0.50	0.65	0.68	0.69	0.70	8.6	4.7	1.1	0.2	2.4	4.8
Algeria	0.34	0.67	1.00	0.96	1.01	1.01	12.2	6.9	-1.0	4.7	0.3	6.3
Egypt	0.25	0.38	0.55	0.60	0.59	0.62	7.3	6.5	2.1	-1.0	5.3	5.3
Libya	1.30	2.63	2.46	2.32	2.22	2.32	12.4	-1.1	-1.4	-4.4	4.5	3.3
Morocco	0.21	0.26	0.27	0.29	0.29	0.28	3.8	0.6	2.5	-1.4	-3.4	1.7
Tunisia	0.42	0.57	0.59	0.67	0.65	0.64	5.2	0.5	3.4	-3.4	-0.8	2.4
Energy Dependency (%)												
North Africa	-526.2	-348.5	-185.5	-194.5	-197.8	-193.1	-6.6	-10.0	1.2	1.7	-2.3	-5.4
Algeria	-877.4	-432.5	-280.7	-324.3	-307.8	-307.1	-11.1	-7.0	3.7	-5.1	-0.2	-5.7
Egypt	4.0	-99.4	-75.4	-62.2	-61.1	-59.6	-	-4.5	-4.7	-1.7	-2.6	-
Libya	-2505.9	-1230.0	-552.2	-606.4	-663.6	-628.0	-11.2	-12.5	2.4	9.4	-5.4	-7.4
Morocco	85.2	76.4	85.5	89.9	87.1	88.7	-1.8	1.9	1.2	-3.1	1.8	0.2
Tunisia	-109.8	-68.4	-45.8	-7.1	-13.0	-18.8	-7.6	-6.5	-37.2	82.8	44.1	-9.3
GDP/Capita (thousand 1985 ECU/inhabitant)												
North Africa	2.12	2.01	1.92	1.83	1.79	1.73	-0.9	-0.8	-1.1	-2.7	-3.2	-1.1
Algeria	4.44	4.00	2.95	2.76	2.65	2.51	-1.7	-4.9	-1.7	-3.8	-5.4	-3.1
Egypt	1.02	1.11	1.46	1.53	1.53	1.51	1.4	4.8	1.2	-0.5	-0.9	2.2
Libya	15.40	12.13	8.70	5.48	4.93	4.51	-3.9	-5.4	-10.9	-10.2	-8.5	-6.6
Morocco	0.76	0.85	0.96	0.98	0.96	0.95	1.8	2.1	0.4	-1.3	-1.5	1.2
Tunisia	1.05	1.37	1.43	1.58	1.59	1.59	4.5	0.8	2.4	0.4	0.1	2.3

NORTH AFRICA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	149.9	204.8	199.3	241.0	250.5	254.9	5.3	-0.4	4.9	4.0	1.8
Solids	0.4	0.4	0.4	0.3	0.3	0.4	2.5	0.9	-8.4	9.0	3.6
Oil	139.0	182.2	154.0	180.5	185.3	187.5	4.6	-2.8	4.1	2.7	1.2
Natural gas	8.1	19.1	41.6	56.6	61.2	63.4	15.3	13.9	8.0	8.2	3.6
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Hydro	0.7	1.0	0.9	1.0	1.0	1.0	6.4	-2.1	2.6	1.5	0.9
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	1.7	2.1	2.5	2.6	2.7	2.7	3.4	2.9	1.7	0.8	1.2
Net Imports	-125.7	-160.7	-129.5	-158.4	-165.7	-169.3	4.2	-3.5	5.2	4.6	2.2
Solids	0.7	0.9	2.2	2.3	2.4	2.5	4.5	16.5	1.2	3.3	3.9
Oil	-121.4	-153.5	-111.1	-131.1	-134.7	-136.9	4.0	-5.2	4.2	2.8	1.6
Crude oil	*-120.5*	*-146.6*	*-88.5*	*-105.8*	*-109.3*	*-109.9*	*3.3*	*-8.1*	*4.6*	*3.3*	*0.5*
Oil products	*-1.0*	*-6.9*	*-22.7*	*-25.2*	*-25.4*	*-27.0*	*38.9*	*22.0*	*2.7*	*0.6*	*6.2*
Natural gas	-5.0	-8.2	-20.6	-29.6	-33.3	-34.9	8.6	16.7	9.5	12.4	4.8
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Gross Inland Consumption	23.3	44.6	68.0	79.3	81.6	85.5	11.4	7.3	3.9	3.0	4.8
Solids	1.1	1.4	2.6	2.6	2.7	2.8	3.5	11.1	0.5	2.6	4.1
Oil	16.7	29.3	41.1	46.1	47.4	50.6	9.8	5.8	2.9	2.9	6.7
Natural gas	3.2	10.9	21.0	26.9	27.9	28.4	23.0	11.5	6.5	3.5	2.1
Other *(1)*	2.4	3.1	3.3	3.6	3.6	3.7	4.3	1.5	1.9	0.9	1.1
Electricity Generation in TWh	18.0	39.1	71.9	91.4	95.1	na	13.8	10.7	6.2	4.1	na
Nuclear	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Hydro	8.0	11.6	10.2	11.3	11.5	na	6.4	-2.1	2.6	1.7	na
Thermal	10.0	27.5	61.7	80.1	83.6	na	18.3	14.4	6.7	4.4	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	3.2	9.0	16.4	18.3	19.2	na	19.1	10.4	2.9	4.9	na
Solids	0.3	0.4	0.6	0.7	0.7	na	3.2	7.4	6.0	-3.8	na
Oil	2.2	5.5	8.4	9.3	9.8	na	16.4	7.3	2.6	5.0	na
Gas	0.6	3.1	7.4	8.3	8.8	na	30.2	15.4	2.9	5.6	na
Geothermal	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Biomass	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Average Thermal Efficiency in %	27.3	26.2	32.4	37.6	37.4	na	-0.7	3.6	3.8	-0.5	na
Non-Energy Uses	0.6	1.3	1.9	1.4	1.2	na	13.3	6.4	-7.6	-12.8	na
Total Final Energy Demand	16.6	29.4	42.9	50.0	51.4	na	10.0	6.5	3.9	2.8	na
Solids	0.8	0.9	1.9	1.7	2.0	na	3.8	12.4	-2.3	14.6	na
Oil	12.4	20.8	27.7	32.5	32.2	na	9.0	4.9	4.1	-0.8	na
Gas	0.4	2.8	5.6	6.5	7.1	na	35.9	12.3	3.7	9.4	na
Electricity	1.3	2.8	5.2	6.7	7.4	na	13.5	11.3	6.1	11.6	na
Heat	0.0	0.0	0.0	0.0	0.0	na	-	-	-	-	na
Biomass	1.7	2.1	2.5	2.6	2.7	na	3.4	2.9	1.7	0.8	na
CO2 Emissions in Mt of CO2											
Total	57	113	173	205	209	na	12.1	7.3	4.4	1.9	na
Excluding Bunkers and Air Transport	55	109	169	200	204	na	12.2	7.5	4.4	2.0	na
Indicators											
Population (Million)	77.3	90.0	103.8	115.9	119.1	122.0	2.6	2.4	2.8	2.8	2.4
GDP (Index 1985 = 100)	81.1	89.5	98.7	105.4	105.4	104.5	1.6	1.6	1.7	0.0	-0.9
Gross Inl. Consumption/GDP (toe/1985 MECU)	142.6	247.3	341.4	372.8	383.8	405.8	9.6	5.5	2.2	3.0	5.8
Gross Inl. Consumption/Capita (toe/inhabitant)	0.30	0.50	0.65	0.68	0.69	0.70	8.6	4.7	1.1	0.2	2.4
Electricity Generated/Capita (kWh/inhabitant)	233	434	693	789	799	na	10.9	8.1	3.3	1.3	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.74	1.26	1.67	1.77	1.76	na	9.2	4.8	1.5	-0.8	na
Import Dependency (%)	-538.5	-360.1	-190.6	-199.8	-203.0	-198.0	-6.5	-10.1	1.2	1.6	-2.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

ALGERIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	56.8	66.3	87.8	104.6	107.4	109.5	2.6	4.8	4.5	2.7	1.9
Solids	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	21.0	93.3	10.0
Oil	51.8	53.2	54.5	59.9	59.1	59.8	0.4	0.4	2.4	-1.2	1.1
Natural gas	4.7	12.8	32.8	44.3	47.8	49.2	18.2	17.1	7.8	7.9	2.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.0	0.0	0.0	0.0	0.0	0.0	-10.6	0.0	-14.1	108.3	1.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.3	0.3	0.4	0.4	0.4	0.4	3.0	3.1	2.7	0.0	1.0
Net Imports	-50.5	-56.2	-64.1	-79.5	-80.8	-82.8	1.8	2.2	5.5	1.6	2.5
Solids	0.2	0.4	0.9	0.6	0.6	0.6	15.4	15.3	-7.4	0.0	0.0
Oil	-48.0	-50.3	-45.0	-50.5	-49.1	-49.7	0.8	-1.8	2.9	-2.8	1.2
Crude oil	*-46.2*	*-43.5*	*-27.5*	*-32.2*	*-31.5*	*-31.5*	*-1.0*	*-7.4*	*4.0*	*-2.1*	*-0.1*
Oil products	*-1.8*	*-6.8*	*-17.5*	*-18.3*	*-17.5*	*-18.2*	*24.8*	*17.2*	*1.1*	*-4.1*	*3.6*
Natural gas	-2.7	-6.3	-20.1	-29.6	-32.3	-33.8	15.2	21.4	10.3	9.0	4.5
Electricity	0.0	0.0	0.0	0.0	-0.1	-0.1	-	-	-	-	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	5.5	12.6	22.6	24.1	25.9	26.6	14.8	10.3	1.6	7.5	2.9
Solids	0.2	0.4	0.9	0.7	0.7	0.7	14.5	15.4	-7.1	2.1	0.4
Oil	3.0	5.4	8.5	8.3	9.3	10.1	10.1	8.0	-0.6	11.8	8.6
Natural gas	2.0	6.5	12.8	14.7	15.5	15.4	21.8	12.0	3.5	5.7	-0.4
Other *(1)*	0.3	0.4	0.4	0.5	0.4	0.4	1.5	3.3	1.3	-8.4	1.1
Electricity Generation in TWh	3.1	7.1	13.0	16.0	17.3	na	15.1	10.5	5.4	8.4	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.5	0.3	0.3	0.1	0.3	na	-10.4	-0.5	-14.3	117.0	na
Thermal	2.6	6.9	12.7	15.9	17.1	na	17.8	10.8	5.6	7.5	na
Generation Capacity in GWe	1.1	2.8	3.7	4.7	4.7	na	16.8	4.9	5.7	0.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.3	0.3	0.3	0.3	0.3	na	-0.1	0.0	0.1	0.0	na
Thermal	0.8	2.5	3.5	4.4	4.4	na	20.6	5.4	6.1	0.0	na
Average Load Factor in %	31.6	28.9	39.7	39.2	42.5	na	-1.5	5.4	-0.3	8.4	na
Fuel Inputs for Thermal Power Generation	0.6	2.3	4.7	3.8	4.0	na	24.4	12.6	-5.1	5.2	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	0.2	0.3	0.4	0.3	0.3	na	9.0	5.4	-1.9	-5.2	na
Gas	0.5	2.0	4.3	3.4	3.7	na	28.2	13.4	-5.4	6.3	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	35.8	25.8	23.5	36.1	36.9	na	-5.4	-1.5	11.3	2.2	na
Non-Energy Uses	0.2	0.3	0.5	0.0	0.0	na	6.8	11.3	-	-	na
Total Final Energy Demand	3.4	6.7	11.4	12.3	13.3	na	12.0	9.4	1.9	7.6	na
Solids	0.2	0.4	0.9	0.7	0.7	na	14.5	15.4	-7.0	2.1	na
Oil	2.4	4.7	7.0	7.8	8.2	na	11.7	7.1	2.7	5.1	na
Gas	0.4	0.9	2.3	2.4	2.9	na	16.7	17.4	1.0	18.6	na
Electricity	0.2	0.4	0.8	1.0	1.0	na	14.3	10.7	5.4	6.7	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.3	0.3	0.4	0.4	0.4	na	3.0	3.1	2.7	0.0	na
CO2 Emissions in Mt of CO2											
Total	13.5	32.5	57.5	63.7	67.0	na	15.8	10.0	2.6	5.2	na
Excluding Bunkers and Air Transport	12.9	31.5	56.3	62.5	65.8	na	16.0	10.2	2.7	5.3	na
Indicators											
Population (Million)	16.3	18.7	22.5	25.0	25.7	26.3	2.3	3.2	2.7	2.6	2.6
GDP (Index 1985 = 100)	96.4	99.6	88.7	92.0	90.8	88.1	0.5	-1.9	0.9	-1.3	-2.9
Gross Inl. Consumption/GDP (toe/1985 MECU)	76	169	340	349	381	403	14.2	12.4	0.7	8.9	6.0
Gross Inl. Consumption/Capita (toe/inhabitant)	0.34	0.67	1.00	0.96	1.01	1.01	12.2	6.9	-1.0	4.7	0.3
Electricity Generated/Capita (kWh/inhabitant)	188	382	576	640	676	na	12.5	7.1	2.6	5.7	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.83	1.74	2.55	2.55	2.61	na	13.2	6.6	-0.1	2.6	na
Import Dependency (%)	-877	-432	-281	-324	-308	-311	-11.1	-7.0	3.7	-5.1	1.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

EGYPT: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	8.8	34.2	47.9	54.8	55.4	56.8	25.3	5.8	3.5	1.1	2.4
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	7.6	30.9	41.8	46.2	46.2	46.9	26.3	5.1	2.6	-0.1	1.5
Natural gas	0.0	1.6	4.3	6.7	7.4	8.0	87.9	18.1	11.8	10.2	7.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.5	0.8	0.8	0.9	0.9	0.9	8.1	-0.9	1.7	-0.4	1.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.7	0.8	1.0	1.0	1.0	1.0	3.1	3.5	1.1	0.1	1.0
Net Imports	0.4	-16.9	-21.1	-20.9	-20.8	-21.8	-	3.8	-0.3	-0.1	4.7
Solids	0.4	0.5	0.7	0.8	0.7	0.7	2.7	7.3	0.8	-5.7	0.0
Oil	0.0	-17.4	-21.8	-21.6	-21.5	-22.5	176.3	3.9	-0.2	-0.3	4.5
Crude oil	*-0.2*	*-17.1*	*-21.2*	*-19.9*	*-18.5*	*-19.1*	*109.5*	*3.6*	*-1.5*	*-7.4*	*3.5*
Oil products	*0.2*	*-0.2*	*-0.6*	*-1.7*	*-3.1*	*-3.4*	-	*20.1*	*27.0*	*83.8*	*10.7*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	9.0	16.0	26.3	31.9	32.4	35.0	9.9	8.7	4.9	1.7	7.8
Solids	0.5	0.5	0.7	0.8	0.7	0.7	2.1	5.3	0.8	-5.7	0.0
Oil	7.3	12.2	19.5	22.5	22.4	24.3	8.8	8.1	3.6	-0.4	8.6
Natural gas	0.0	1.6	4.3	6.7	7.4	8.0	87.9	18.1	11.8	10.2	7.9
Other *(1)*	1.2	1.6	1.8	1.9	1.9	1.9	5.5	1.4	1.4	-0.1	1.0
Electricity Generation in TWh	9.2	18.9	33.5	43.5	46.1	na	12.9	10.0	6.8	6.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	6.1	9.8	9.3	9.9	9.9	na	8.2	-0.9	1.7	-0.3	na
Thermal	3.0	9.1	24.2	33.5	36.2	na	20.1	17.6	8.5	7.9	na
Generation Capacity in GWe	4.0	4.9	11.2	11.7	11.7	na	3.8	14.7	1.1	0.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	2.4	2.5	2.4	2.7	2.7	na	0.6	-0.6	2.9	0.0	na
Thermal	1.5	2.4	8.8	9.0	9.0	na	8.1	24.1	0.6	0.0	na
Average Load Factor in %	26.4	43.7	34.0	42.3	44.8	na	8.7	-4.1	5.6	6.0	na
Fuel Inputs for Thermal Power Generation	1.0	3.1	7.0	8.7	9.4	na	20.7	14.8	5.8	7.9	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	1.0	2.2	4.4	4.7	4.8	na	14.4	12.0	2.1	1.5	na
Gas	0.0	0.8	2.6	4.0	4.6	na	0.0	20.9	11.1	15.6	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	26.5	25.8	29.9	33.1	33.1	na	-0.5	2.5	2.6	0.0	na
Non-Energy Uses	0.2	0.5	1.0	1.2	1.0	na	14.1	11.7	4.1	-13.2	na
Total Final Energy Demand	7.4	12.1	18.2	21.4	21.5	na	8.5	7.1	4.1	0.5	na
Solids	0.4	0.5	0.7	0.6	0.8	na	2.0	5.4	-1.0	20.4	na
Oil	5.6	8.7	12.6	14.2	13.5	na	7.5	6.3	3.1	-5.0	na
Gas	0.0	0.8	1.5	2.4	2.5	na	151.1	12.6	12.1	1.6	na
Electricity	0.7	1.3	2.5	3.1	3.8	na	12.0	10.7	6.4	20.6	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.7	0.8	1.0	1.0	1.0	na	3.1	3.5	1.1	0.1	na
CO2 Emissions in Mt of CO2											
Total	22.3	39.7	65.9	78.0	78.3	na	10.1	8.8	4.3	0.3	na
Excluding Bunkers and Air Transport	21.7	38.8	64.7	76.4	76.6	na	10.2	8.9	4.2	0.4	na
Indicators											
Population (Million)	36.4	42.1	47.8	53.2	54.7	56.0	2.5	2.1	2.7	2.8	2.4
GDP (Index 1985 = 100)	57.8	72.8	109.1	127.4	130.2	132.1	3.9	7.0	4.0	2.3	1.4
Gross Inl. Consumption/GDP (toe/1985 MECU)	244	343	377	391	389	413	5.8	1.6	0.9	-0.5	6.3
Gross Inl. Consumption/Capita (toe/inhabitant)	0.25	0.38	0.55	0.60	0.59	0.62	7.3	6.5	2.1	-1.0	5.3
Electricity Generated/Capita (kWh/inhabitant)	252	450	701	817	843	na	10.2	7.7	3.9	3.1	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.61	0.94	1.38	1.47	1.43	na	7.4	6.6	1.5	-2.4	na
Import Dependency (%)	4.0	-99.4	-75.4	-62.2	-61.1	-62.4	-	-4.5	-4.7	-1.7	2.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

LIBYA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	78.6	96.7	56.3	74.9	80.4	81.3	3.5	-8.6	7.4	7.3	1.2
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	75.3	92.2	52.2	69.7	74.6	75.4	3.4	-9.0	7.5	7.1	1.0
Natural gas	3.1	4.3	4.0	5.2	5.7	5.8	5.5	-1.4	6.7	9.6	3.5
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0	0	0	0	0	0	-	-	-	-	-
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.1	0.1	0.1	0.1	0.1	0.1	2.2	0.0	0.0	0.0	0.0
Net Imports	-76.0	-89.2	-47.5	-64.3	-69.9	-70.2	2.7	-10.0	7.9	8.6	0.5
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	-73.8	-87.3	-46.6	-63.4	-68.3	-68.4	2.9	-9.9	8.0	7.6	0.2
Crude oil	*-73.8*	*-86.5*	*-40.8*	*-56.6*	*-61.3*	*-61.2*	*2.7*	*-11.8*	*8.6*	*8.2*	*-0.1*
Oil products	*0.1*	*-0.9*	*-5.9*	*-6.8*	*-7.0*	*-7.2*	-	*37.8*	*3.8*	*2.9*	*3.0*
Natural gas	-2.3	-1.9	-0.8	-0.9	-1.6	-1.8	-3.2	-12.6	1.9	76.1	12.5
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	3.0	7.2	8.6	10.5	10.5	11.1	15.6	2.9	5.3	-0.8	6.3
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	2.0	4.7	5.3	6.2	6.3	6.9	14.7	2.2	3.7	1.8	10.5
Natural gas	0.9	2.5	3.1	4.3	4.1	4.1	18.8	4.1	7.9	-4.5	0.0
Other *(1)*	0.1	0.1	0.1	0.1	0.1	0.1	2.2	0.0	0.0	0.0	0.0
Electricity Generation in TWh	1.4	4.8	13.3	16.8	16.8	na	23.2	18.3	6.1	0.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0	0	0	0	0	na	-	-	-	-	na
Thermal	1.4	4.8	13.3	16.8	16.8	na	23.2	18.3	6.1	0.0	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	0.6	1.7	1.8	2.3	2.3	na	18.8	0.1	6.6	0.0	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	0.6	1.7	1.8	2.3	2.3	na	18.8	0.1	6.6	0.0	na
Gas	0	0	0	0	0	na	-	-	-	-	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	19.2	23.9	65.2	63.9	63.9	na	3.7	18.2	-0.5	0.0	na
Non-Energy Uses	0.0	0.3	0.2	0.1	0.1	na	43.3	-8.6	-7.5	-33.3	na
Total Final Energy Demand	1.3	3.9	5.7	6.9	7.1	na	20.5	6.7	4.8	1.7	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	1.0	2.3	3.0	4.1	4.1	na	14.4	4.1	8.0	0.2	na
Gas	0.0	1.0	1.5	1.3	1.4	na	0.0	6.6	-3.4	8.4	na
Electricity	0.1	0.4	1.1	1.4	1.4	na	23.2	18.3	6.1	0.0	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.1	0.1	0.1	0.1	0.1	na	2.2	0.0	0.0	0.0	na
CO2 Emissions in Mt of CO2											
Total	7.3	18.7	22.5	30.1	29.7	na	17.0	3.1	7.6	-1.5	na
Excluding Bunkers and Air Transport	6.9	17.8	21.5	29.1	28.7	na	17.1	3.2	8.0	-1.5	na
Indicators											
Population (Million)	2.3	2.8	3.5	4.5	4.7	4.8	2.9	4.0	6.8	3.7	1.7
GDP (Index 1985 = 100)	112.5	105.0	95.2	78.1	72.8	67.7	-1.1	-1.6	-4.8	-6.8	-6.9
Gross Inl. Consumption/GDP (toe/1985 MECU)	84	216	283	423	450	514	17.0	4.6	10.6	6.5	14.1
Gross Inl. Consumption/Capita (toe/inhabitant)	1.30	2.63	2.46	2.32	2.22	2.32	12.4	-1.1	-1.4	-4.4	4.5
Electricity Generated/Capita (kWh/inhabitant)	593	1751	3805	3700	3567	na	19.8	13.8	-0.7	-3.6	na
CO2 Emissions/Capita (t of CO2/inhabitant)	3.14	6.78	6.43	6.64	6.30	na	13.7	-0.9	0.8	-5.1	na
Import Dependency (%)	-2506	-1230	-552	-606	-664	-632	-11.2	-12.5	2.4	9.4	-4.7

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

MOROCCO: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	0.7	0.9	0.9	0.8	0.8	0.8	3.2	0.3	-3.3	1.4	2.8
Solids	0.4	0.4	0.4	0.3	0.3	0.3	2.9	0.6	-9.2	4.7	3.0
Oil	0.0	0.0	0.0	0.0	0.0	0.0	-9.8	10.1	-12.0	-20.0	0.8
Natural gas	0.1	0.1	0.1	0.0	0.0	0.0	-3.2	5.5	-12.8	-27.3	8.6
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.1	0.1	0.1	0.1	0.1	0.1	2.1	-13.4	17.5	0.0	0.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.2	0.3	0.3	0.3	0.3	0.3	7.7	2.6	1.5	3.7	3.0
Net Imports	3.0	4.0	5.2	6.7	6.5	6.6	5.0	4.3	6.4	-2.0	0.7
Solids	0.0	0.0	0.5	0.8	0.9	1.0	52.0	-	11.8	13.8	10.0
Oil	3.0	4.1	4.7	5.8	5.5	5.5	5.1	2.3	5.7	-5.0	-0.9
Crude oil	*2.7*	*4.1*	*4.6*	*5.8*	*5.3*	*5.3*	*7.1*	*2.1*	*6.0*	*-9.5*	*-0.1*
Oil products	*0.3*	*0.0*	*0.0*	*0.0*	*0.2*	*0.2*	-	-	-	-	*-17.9*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	511.1	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	3.5	5.2	6.0	7.4	7.5	7.4	6.9	2.6	5.1	1.1	-1.1
Solids	0.4	0.4	0.9	1.2	1.2	1.4	1.8	14.7	5.9	8.0	8.7
Oil	2.8	4.3	4.7	5.7	5.7	5.5	7.8	1.3	5.2	-1.0	-3.6
Natural gas	0.1	0.1	0.1	0.0	0.0	0.0	-3.2	5.5	-12.8	-27.3	8.6
Other *(1)*	0.3	0.4	0.4	0.4	0.5	0.5	5.6	-1.4	5.1	13.3	2.0
Electricity Generation in TWh	3.1	5.2	7.8	9.6	9.2	na	9.4	6.7	5.5	-4.4	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	1.3	1.5	0.6	1.2	1.2	na	2.1	-13.3	17.4	0.5	na
Thermal	1.7	3.7	7.1	8.4	8.0	na	13.7	11.4	4.2	-5.1	na
Generation Capacity in GWe	0.9	1.2	2.2	2.4	2.4	na	6.1	10.5	1.4	0.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.4	0.5	0.6	0.6	0.6	na	3.1	4.1	0.4	0.0	na
Thermal	0.5	0.7	1.6	1.7	1.7	na	8.5	13.9	1.8	0.0	na
Average Load Factor in %	40.9	48.9	39.7	46.5	44.5	na	3.0	-3.4	4.0	-4.4	na
Fuel Inputs for Thermal Power Generation	0.5	1.1	1.9	2.2	2.2	na	11.7	9.9	4.2	-0.4	na
Solids	0.3	0.4	0.6	0.7	0.7	na	3.2	7.4	5.9	-3.8	na
Oil	0.2	0.7	1.3	1.5	1.5	na	19.1	11.1	3.4	1.2	na
Gas	0	0	0	0	0	na	-	-	-	-	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	27.2	30.2	32.7	32.8	31.2	na	1.7	1.3	0.0	-4.7	na
Non-Energy Uses	0.1	0.1	0.1	0.0	0.0	na	0.5	0.9	-100.0	-	na
Total Final Energy Demand	2.7	4.0	4.2	5.1	5.3	na	6.6	0.9	5.4	4.0	na
Solids	0.1	0.0	0.3	0.4	0.5	na	-9.0	47.4	4.9	28.7	na
Oil	2.2	3.2	2.9	3.7	3.8	na	6.7	-1.7	6.0	1.4	na
Gas	0.1	0.1	0.1	0.0	0.0	na	-3.2	5.5	-12.8	-27.3	na
Electricity	0.2	0.4	0.6	0.7	0.8	na	9.6	6.8	6.3	6.7	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.2	0.3	0.3	0.3	0.3	na	7.7	2.6	1.5	3.7	na
CO2 Emissions in Mt of CO2											
Total	9.1	13.8	16.7	20.3	20.8	na	7.2	3.2	5.1	2.4	na
Excluding Bunkers and Air Transport	8.6	13.0	16.0	19.6	20.1	na	7.1	3.5	5.2	2.6	na
Indicators											
Population (Million)	16.8	20.1	22.6	25.1	25.7	26.3	3.0	2.0	2.6	2.6	2.3
GDP (Index 1985 = 100)	64.1	85.0	108.4	122.3	123.8	124.8	4.8	4.1	3.1	1.2	0.8
Gross Inl. Consumption/GDP (toe/1985 MECU)	271	304	278	301	301	295	2.0	-1.5	2.0	-0.2	-1.9
Gross Inl. Consumption/Capita (toe/inhabitant)	0.21	0.26	0.27	0.29	0.29	0.28	3.8	0.6	2.5	-1.4	-3.4
Electricity Generated/Capita (kWh/inhabitant)	183	262	343	384	358	na	6.2	4.6	2.8	-6.8	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.54	0.69	0.74	0.81	0.81	na	4.1	1.1	2.4	-0.1	na
Import Dependency (%)	85.2	76.4	85.5	89.9	87.1	89.0	-1.8	1.9	1.2	-3.1	2.1

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

TUNISIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	4.9	6.7	6.4	5.8	6.4	6.5	5.2	-0.7	-2.7	11.5	1.4
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	4.3	5.8	5.4	4.7	5.4	5.5	5.3	-1.2	-3.4	15.3	1.1
Natural gas	0.2	0.4	0.4	0.3	0.3	0.3	9.9	1.1	-3.1	-21.5	8.6
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.0	125.0	1.0
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.5	0.6	0.7	0.7	0.7	0.7	2.5	2.6	2.4	1.3	1.0
Net Imports	-2.5	-2.5	-2.0	-0.4	-0.7	-1.0	-0.2	-3.6	-33.8	83.2	46.1
Solids	0.1	0.1	0.1	0.1	0.1	0.1	-9.5	-0.5	7.1	6.3	0.0
Oil	-2.6	-2.6	-2.4	-1.4	-1.4	-1.7	-0.5	-1.4	-12.7	1.4	25.5
Crude oil	*-3.0*	*-3.6*	*-3.7*	*-2.9*	*-3.4*	*-3.4*	*3.1*	*0.5*	*-5.6*	*15.4*	*-0.1*
Oil products	*0.3*	*1.0*	*1.3*	*1.6*	*2.0*	*1.6*	*20.6*	*4.7*	*4.0*	*27.6*	*-17.9*
Natural gas	0.0	0.0	0.3	0.9	0.6	0.6	0.0	0.0	33.4	-34.0	4.5
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	2.3	3.6	4.4	5.4	5.4	5.5	8.0	3.1	5.4	0.1	1.4
Solids	0.1	0.1	0.1	0.1	0.1	0.1	-9.5	-0.5	7.1	6.3	0.0
Oil	1.5	2.7	3.0	3.4	3.7	3.7	10.2	2.0	3.0	10.7	0.5
Natural gas	0.2	0.4	0.7	1.2	0.9	0.9	9.9	11.1	16.9	-30.6	5.7
Other *(1)*	0.5	0.6	0.7	0.7	0.7	0.7	2.5	2.7	2.2	1.9	1.0
Electricity Generation in TWh	1.3	2.9	4.4	5.5	5.7	na	14.0	7.1	5.6	3.6	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.0	0.0	0.1	0.0	0.1	na	1.5	13.8	-4.1	138.6	na
Thermal	1.3	2.9	4.4	5.5	5.6	na	14.2	7.1	5.7	2.5	na
Generation Capacity in GWe	0.4	0.7	1.4	1.4	1.4	na	11.4	11.6	0.0	0.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.0	0.0	0.1	0.1	0.1	na	-0.2	14.3	0.0	0.0	na
Thermal	0.4	0.7	1.4	1.4	1.4	na	12.1	11.5	0.0	0.0	na
Average Load Factor in %	39.8	45.7	35.7	44.4	46.0	na	2.3	-4.0	5.6	3.6	na
Fuel Inputs for Thermal Power Generation	0.4	0.9	1.1	1.4	1.4	na	14.4	4.0	5.4	1.8	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	0.2	0.6	0.6	0.5	0.9	na	19.8	0.6	-6.0	81.9	na
Gas	0.2	0.3	0.5	0.9	0.5	na	6.7	10.1	16.0	-42.1	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	29.0	28.5	33.9	34.2	34.5	na	-0.2	2.9	0.2	0.8	na
Non-Energy Uses	0.0	0.1	0.1	0.1	0.1	na	8.6	-0.7	7.8	21.0	na
Total Final Energy Demand	1.9	2.8	3.4	4.2	4.2	na	7.0	3.3	5.7	0.7	na
Solids	0.1	0.1	0.1	0.1	0.1	na	-9.5	-0.5	7.1	6.3	na
Oil	1.1	1.9	2.2	2.7	2.7	na	8.4	2.5	5.7	-0.9	na
Gas	0.0	0.1	0.2	0.3	0.3	na	28.4	13.3	15.0	7.9	na
Electricity	0.1	0.2	0.3	0.4	0.4	na	14.6	7.4	5.5	3.8	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.5	0.6	0.7	0.7	0.7	na	2.5	2.6	2.4	1.3	na
CO2 Emissions in Mt of CO2											
Total	5.1	8.7	10.5	13.1	13.4	na	9.3	3.1	5.8	2.2	na
Excluding Bunkers and Air Transport	4.7	8.1	10.2	12.5	13.0	na	9.7	3.8	5.4	3.5	na
Indicators											
Population (Million)	5.5	6.4	7.5	8.1	8.4	8.5	2.7	2.6	2.0	3.6	2.2
GDP (Index 1985 = 100)	52.8	80.7	98.6	117.4	122.1	124.9	7.3	3.4	4.5	4.0	2.3
Gross Inl. Consumption/GDP (toe/1985 MECU)	399	416	409	424	408	404	0.7	-0.3	0.9	-3.8	-0.9
Gross Inl. Consumption/Capita (toe/inhabitant)	0.42	0.57	0.59	0.67	0.65	0.64	5.2	0.5	3.4	-3.4	-0.8
Electricity Generated/Capita (kWh/inhabitant)	244	458	593	681	681	na	11.1	4.4	3.5	0.0	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.93	1.36	1.40	1.63	1.60	na	6.5	0.5	3.8	-1.4	na
Import Dependency (%)	-109.8	-68.4	-45.8	-7.1	-13.0	-18.9	-7.6	-6.5	-37.2	82.8	44.9

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

OTHER AFRICA

This very large region comprises countries with heterogeneous economic structures. The region is one of the richest in the world for natural resources: there are countries with large energy reserves (coal in South Africa, crude oil in Nigeria, Gabon and Angola). However, most of the countries are still in a rather low stage of economic development, which has conditioned both the level of energy demand and its fuel mix. In fact, gross inland energy consumption per capita has been fairly stable at slightly more than 0.5 toe per inhabitant (30% and 86% less than North Africa and the European Union in 1992 respectively) and non-commercial fuels (biomass) still accounted for 44% of total energy demand in 1992 (48% in 1974).

The region is increasingly a net exporter of solids (mainly South Africa) and crude oil, but a net importer of oil products. There is no external trade for natural gas. The exports of solids and crude oil represented, in 1992, 26% and 73% of their production respectively (3% and 74% in 1974).

Gross inland energy consumption has increased by more than 3% per year in the period, and the increments have been satisfied mainly by solids (41% of the increase), biomass (39% of the increment) and oil (13% of the increment). Natural gas, although increased by 12% per year, it only accounted for 4% of the total demand increment in the period. There was small contributions from hydro and nuclear, but the latter only developed in South Africa in the early 1980s.

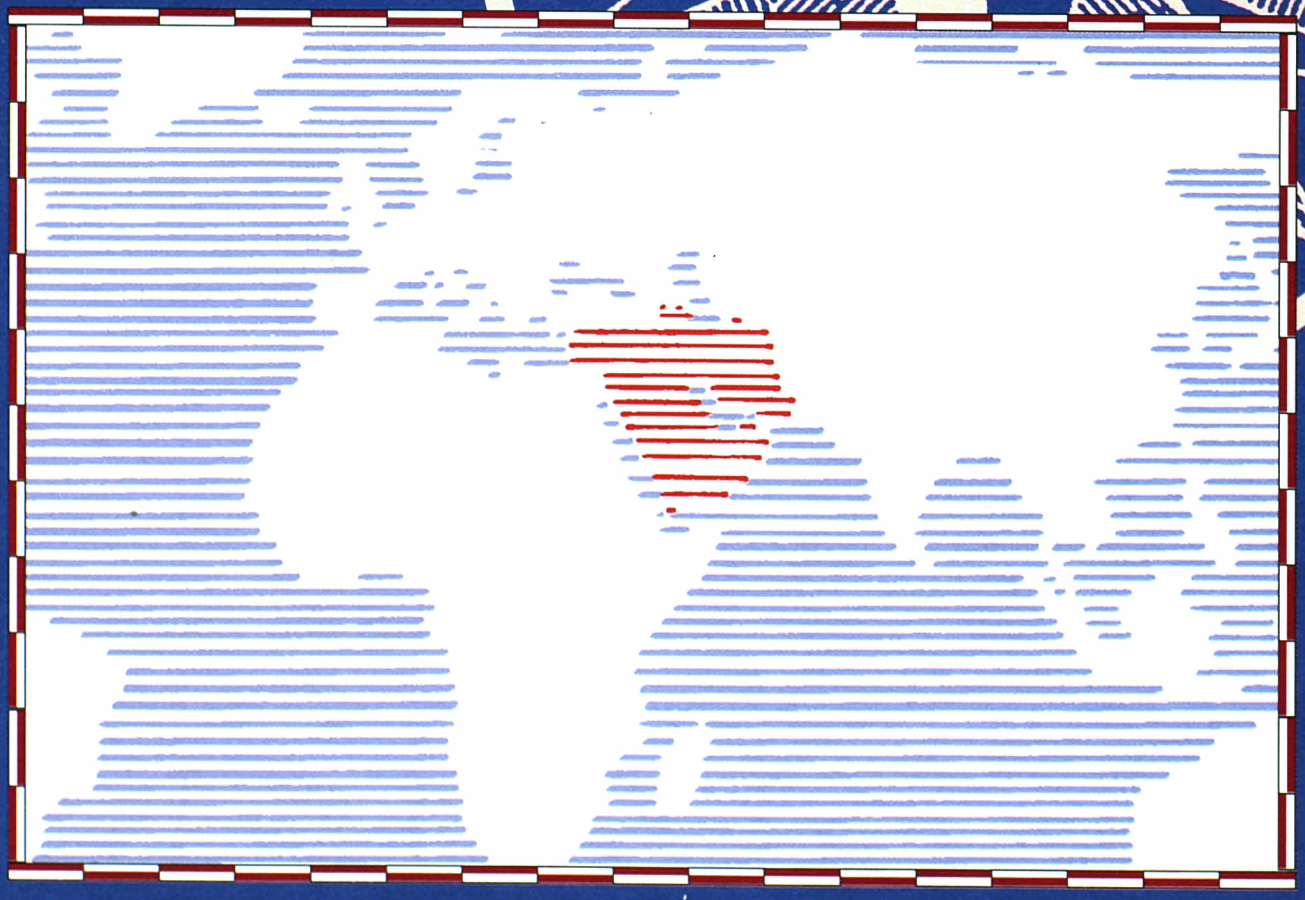
OTHER AFRICA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	246.6	287.3	329.7	381.3	385.8	400.1	2.6	2.3	3.7	1.2	3.7
Solids	42.3	71.7	106.5	114.8	112.6	116.0	9.2	6.8	1.9	-1.9	3.0
Oil	135.2	127.9	114.6	147.4	153.0	162.8	-0.9	-1.8	6.5	3.8	6.4
Natural gas	0.6	1.4	2.9	3.7	4.4	4.8	17.3	12.5	5.9	20.7	8.6
Nuclear	0	0	2.3	2.2	2.4	2.4	-	-	-1.0	8.2	1.6
Hydro	2.2	4.2	3.7	3.7	4.2	4.2	11.5	-2.3	0.3	11.5	0.1
Geothermal	0.0	0.0	0.4	0.3	0.3	0.0	-	-	-	-	-
Biomass	66.4	82.0	99.3	109.2	108.9	110.0	3.6	3.2	2.4	-0.3	1.0
Net Imports	-101.1	-102.8	-101.2	-130.9	-137.3	-148.9	0.3	-0.3	6.7	4.8	8.5
Solids	-1.4	-19.4	-30.1	-29.3	-29.1	-29.7	55.4	7.6	-0.7	-0.6	2.0
Oil	-99.9	-83.4	-71.0	-101.6	-108.0	-119.1	-3.0	-2.7	9.4	6.3	10.3
Crude oil	*-103.5*	*-89.4*	*-77.9*	*-104.6*	*-111.1*	*-119.4*	*-2.4*	*-2.3*	*7.6*	*6.2*	*7.5*
Oil products	*3.6*	*6.0*	*6.9*	*3.0*	*3.1*	*0.3*	*8.7*	*2.4*	*-18.8*	*2.5*	*-90.2*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-	0.0	-6.4	74.5	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	138.2	176.9	220.8	246.4	246.6	251.2	4.2	3.8	2.8	0.1	1.9
Solids	40.0	51.3	73.5	85.0	85.2	86.3	4.3	6.2	3.7	0.2	1.3
Oil	28.9	37.9	38.8	42.3	41.4	43.7	4.6	0.4	2.2	-2.3	5.6
Natural gas	0.6	1.4	2.9	3.7	4.4	4.8	17.3	12.5	5.9	20.7	8.6
Other *(1)*	68.8	86.2	105.5	115.4	115.6	116.4	3.8	3.4	2.3	0.2	0.7
Electricity Generation in TWh	102.3	158.9	204.2	229.6	235.3	na	7.6	4.3	3.0	2.5	na
Nuclear	0	0	8.8	8.4	9.1	na	-	-	-1.0	8.2	na
Hydro	25.7	49.4	42.9	43.4	48.4	na	11.5	-2.3	0.3	11.5	na
Thermal	76.6	109.5	152.4	177.8	177.8	na	6.1	5.7	3.9	0.0	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	na	na	na	na	-	-	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	20.3	30.4	40.2	52.8	52.9	na	6.9	4.8	7.0	0.3	na
Solids	18.6	27.1	35.1	47.7	48.2	na	6.5	4.4	8.0	0.9	na
Oil	1.5	2.3	2.8	2.8	2.8	na	6.8	3.7	0.0	-2.4	na
Gas	0.2	1.0	1.9	1.8	1.6	na	29.1	11.4	-0.2	-11.7	na
Geothermal	0.0	0.0	0.4	0.3	0.3	na	0.0	74.5	-2.1	-7.1	na
Biomass	0.0	0.0	0.0	0.0	0.0	na	8.9	13.2	1.2	0.0	na
Average Thermal Efficiency in %	32.4	31.0	32.6	29.0	28.9	na	-0.7	0.8	-2.9	-0.3	na
Non-Energy Uses	1.4	1.8	1.6	1.8	1.9	na	4.5	-1.5	2.5	4.7	na
Total Final Energy Demand	116.4	143.5	166.6	183.9	183.8	na	3.5	2.5	2.5	0.0	na
Solids	18.0	17.8	17.3	17.9	18.3	na	-0.2	-0.5	0.8	2.3	na
Oil	23.8	31.5	34.4	39.0	38.7	na	4.7	1.5	3.2	-1.0	na
Gas	0.2	0.4	0.8	1.4	1.3	na	9.7	11.1	14.7	-3.3	na
Electricity	7.9	11.8	14.8	16.4	16.7	na	7.0	3.8	2.7	1.5	na
Heat	0.0	0.0	0.0	0.0	0.0	na	-	-	-	-	na
Biomass	66.4	82.0	99.3	109.2	108.9	na	3.6	3.2	2.4	-0.3	na
CO2 Emissions in Mt of CO2											
Total	224	285	329	396	400	na	4.1	2.4	4.7	1.0	na
Excluding Bunkers and Air Transport	218	276	320	387	391	na	4.0	2.5	4.8	1.0	na
Indicators											
Population (Million)	300.3	385.8	457.5	512.6	531.7	527.0	4.3	2.9	2.9	3.7	-0.9
GDP (Index 1985 = 100)	na	na	102.9	119.5	122.3	124.0	na	na	3.8	2.3	1.4
Gross Inl. Consumption/GDP (toe/1985 MECU)	na	na	666	640	626	629	na	na	-1.0	-2.2	0.5
Gross Inl. Consumption/Capita (toe/inhabitant)	0.46	0.46	0.48	0.48	0.46	0.48	-0.1	0.9	-0.1	-3.5	2.8
Electricity Generated/Capita (kWh/inhabitant)	341	412	446	448	443	na	3.2	1.3	0.1	-1.2	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.75	0.74	0.72	0.77	0.75	na	-0.1	-0.4	1.8	-2.6	na
Import Dependency (%)	-70.5	-56.9	-45.2	-52.4	-54.9	-58.5	-3.5	-3.8	3.8	4.8	6.5

(1) Includes nuclear, hydro and wind, net imports of electricity, and biomass.

PART IX

MIDDLE EAST



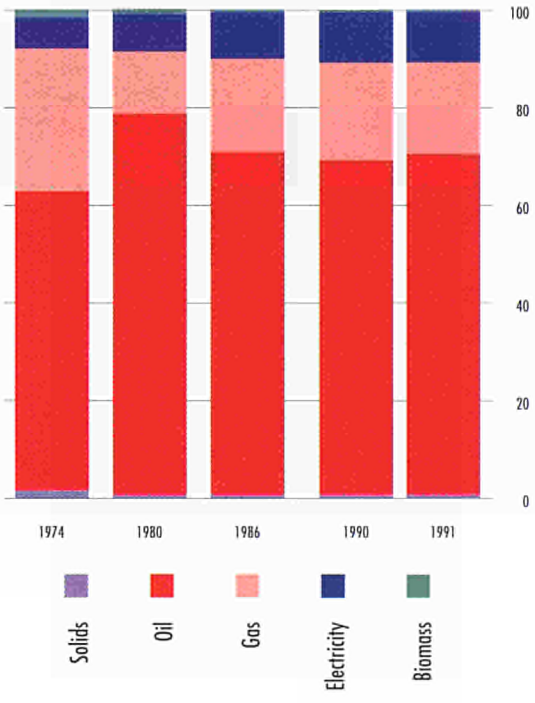
MIDDLE EAST

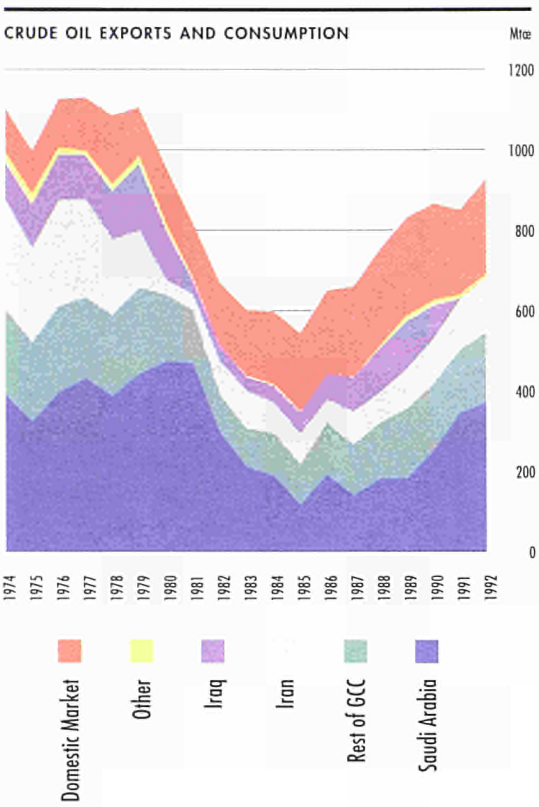
The region as considered here does not correspond to the normal geographical definition since it includes Iran. This inclusion results from the importance of Iranian energy production and exports in the context of the Gulf area. Although some countries of the region are not energy exporters, such as Israel and Lebanon, the Middle East is not only the largest producer and exporter of crude oil in the world, but also where most of the world oil reserves are concentrated. In this context, Iran and the countries of the Gulf Co-operation Council, in particular Saudi Arabia, play a major role.

Economic development in this region has been mainly influenced by crude oil prices and production. However, GDP has not grown the fastest when oil prices were at their highest. In fact, the one of the lowest rates of growth of GDP occurred between 1980 and 1986 when crude prices were above the US$ 30 per barrel in 1993 prices and exchange rates. The fastest GDP growth happened in the second half of the 1980s (3% per year) after the significant drop in prices to around US$ 15 per barrel. After 1990, marked by the Gulf war, the overall GDP of the region decreased in 1991 by 0.8% and had a small recovery of 0.3% in 1992. In this later period, while Saudi Arabian GDP practically stagnated, Iran continued to grow by almost 4% per year.

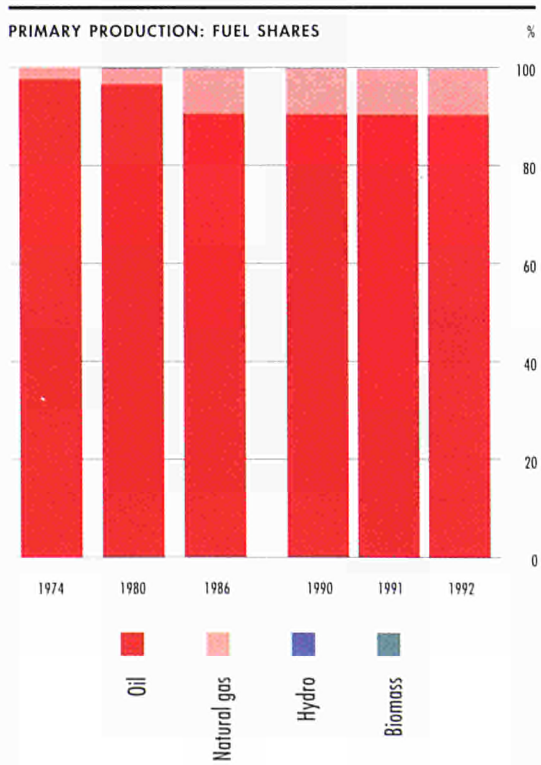
Final energy consumption has increased by 8% per year to 1990 and dropped 2% in 1991. However, the growth to 1990 presents a downward trend as the highest growth (10% per year) occurred in the 1970s and has been slowing down since then. This is especially true for Saudi Arabia where final demand in 1986 was ten fold the level of 1974, and stabilised thereafter. Iran had the highest growth rates from the middle 1980s. These two countries represented 65% of total final demand in the region in 1992. Consumption by fuel shows a certain stability of solids and biomass, both at similar levels (but both together accounted for only 1% of 1991 demand). In 1991, oil accounted for 70% of total, gas for 19% and electricity covered 10% of total final needs.

FINAL ENERGY DEMAND: FUEL SHARES





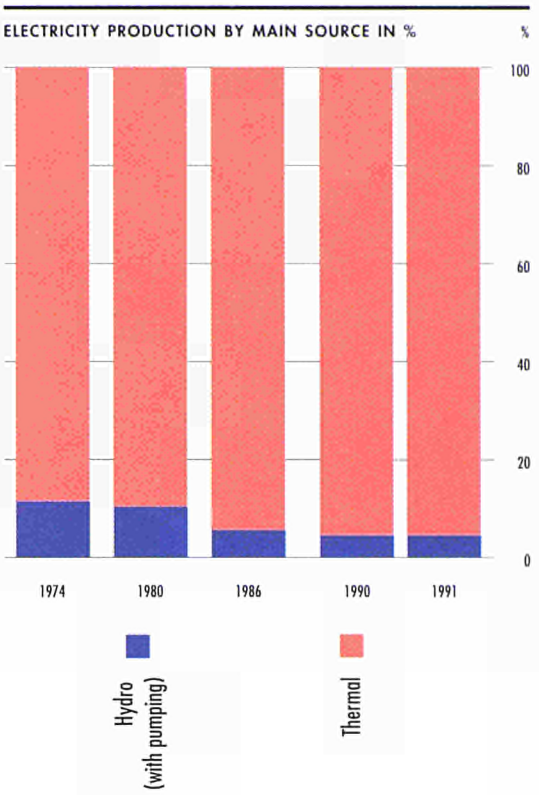
Indigenous **energy production** is dominated by oil with 90% of total production in 1992 (97% in 1974). The evolution of crude oil production was characterised by: a peak level of 1106 Mtoe in 1974; a drop to 652 Mtoe by 1986, or 41% below the peak; a strong increase to 1990 of more than 7% per year; a drop of almost 2% in 1991 (losses in Iraq and Kuwait not totally compensated by strong increases in Iran and Saudi Arabia); and finally a significant increase of 9% in 1992 despite a very small contribution from Iraq. In 1992, Iranian and Saudi production increased only 6% and 2% respectively. From 1990 to 1992, crude production from Iran and Saudi Arabia together increased by 129 Mtoe, or 26% more than in 1990. These two countries accounted for about two thirds of Middle East crude oil production (with a slight increase over the period). In 1992, the GCC countries accounted for 73% of total Middle East production (60% in 1974). However, some GCC countries are not members of OPEC



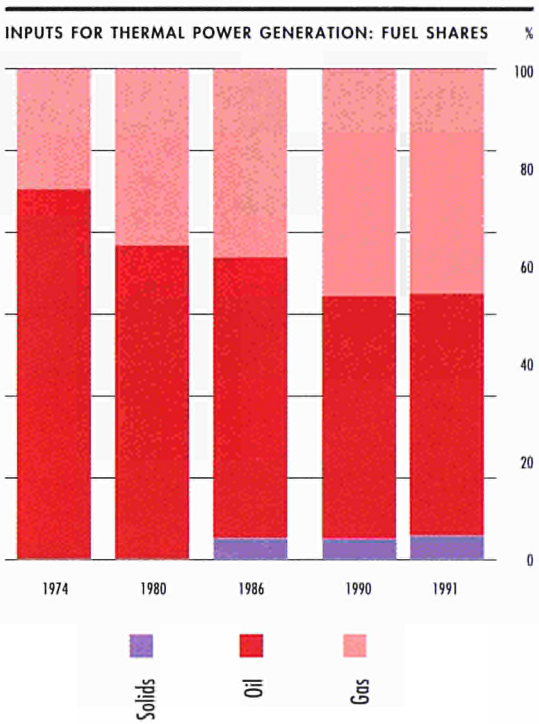
Besides oil, there is some production of natural gas. Iran and Saudi Arabia together accounted for 54% of total gas production in 1992 with 96 Mtoe. There is no nuclear energy, and renewable energy sources (hydro power and biomass) are rather small.

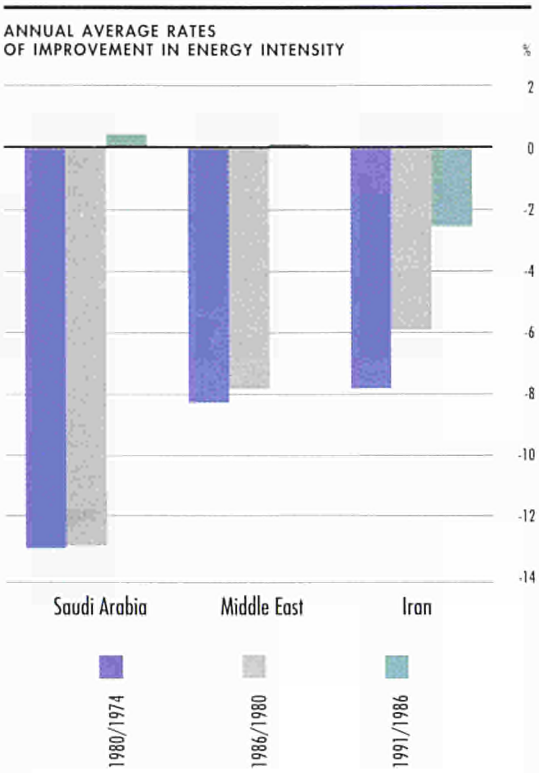
Middle East is the most important **net exporter of energy** in the world. However, this results mainly from exports of crude and oil products, and natural gas to a lesser extent. The region is in fact a net importer of solid fuels. Given the high ratio of exports to production, the profile of exports throughout time is similar to that of production. Indeed, it has been the level of exports which has defined the production volumes. The GCC countries' share of total crude exports were 79% in 1992 against 61% in 1974. However, the share of oil exports on total oil production fell from 94% in 1974 to 77% in 1986 and recovered to 80% in 1992. For the two identified countries these shares were: Iran with 91% in 1974, 53% in 1986 and 71% in 1992; and Saudi Arabia with 95% in 1974, 82% in 1986 and 95% again in 1992. Exports of natural gas from this region are made in the form of LNG.

Electricity generation in the region as a whole is mainly based on thermal units (96% of total in 1991) and some hydro power. Total generation has increased steadily in the period to 1990 by almost 12% per year on average, but in 1991, there was a 4% drop. There is no nuclear energy. And in Saudi Arabia there is no hydro power.



The increment of **inputs for thermal generation** of electricity has been mainly satisfied by gas and oil. The year 1986 was a benchmark in fuel inputs. From 1974 to 1986, oil and gas inputs grew by 11% and 18% per year respectively. After 1986, these fuels increased to 1990 by 1% per year for oil and 9% per year for gas; In addition, solid fuels for power generation penetrated the market but stayed at a relatively low level. In 1991, only solid fuels increased, although slightly, while oil and gas inputs both decreased by more than 7%. The average thermal efficiency has increased from 31% in 1974 to 37% in 1991.





The rising **energy intensity** indicator for this region shows a behaviour that is typical in fast growing economies. Indeed, fast industrialisation and improving living standards normally lead to an increase in the energy intensity of the economy. Between 1974 and 1992 there was an increase of almost 6% per year (Iran 5.5% per year and Saudi Arabia more than 8% per year). Saudi arabian intensity has been slightly declining since 1986 but from a relatively high level.

Due a strong increase in population (over 3% per year) there were significant, steady losses in the GDP per capita which, in 1992, was 27% below the 1974 level. In the case of Iran, the big loss in GDP per capita occurred up to 1980 (a one third drop), followed by another decrease of 19% to 1992. In Saudi Arabia, GDP per capita increased up to 1980 at almost 4% per year, dropped significantly to 1986 (almost 6% per year) and, since then, it has continued to fall by 2% per year. In 1992 the GDP per capita of Iran and Saudi Arabia were 46% and 23% below their 1974 levels respectively. In 1992, Saudi Arabia had a per capita GDP ratio in 1992 equivalent to that of the European Union average in 1974.

In spite of this loss in wealth, the consumption per capita in the region has increased in general by almost 4% in the period. In Saudi Arabia, however, the peak of this ratio occurred in 1986. In 1992 it was 15% below the peak level. Compared to the European Union average, only Saudi Arabia presented higher consumption per capita (34% higher in 1992).

Below are the summary tables for the region as a whole, and for Iran and Saudi Arabia.

MAIN INDICATORS: COMPARISON

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
Middle East	143	232	366	380	364	386	8.3	7.9	0.9	-4.2	6.0	5.6
Iran	127	200	283	342	321	330	7.9	6.0	4.9	-6.1	2.7	5.5
Saudi Arabia	127	266	554	551	542	531	13.1	13.0	-0.2	-1.6	-2.0	8.3
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inl. Consumption/Capita (toe/inhabitant)												
Middle East	0.87	1.32	1.74	1.79	1.63	1.69	7.3	4.8	0.7	-8.9	3.7	3.8
Iran	0.91	0.96	1.16	1.35	1.25	1.29	0.8	3.2	4.0	-7.8	3.5	1.9
Saudi Arabia	1.45	3.79	5.51	4.88	4.79	4.68	17.4	6.4	-3.0	-1.7	-2.4	6.7
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9	0.4
GDP/Capita (thousand 1985 ECU/inhabitant)												
Middle East	6.03	5.68	4.76	4.72	4.49	4.40	-1.0	-2.9	-0.2	-4.9	-2.2	-1.7
Iran	7.20	4.80	4.09	3.95	3.88	3.91	-6.5	-2.6	-0.9	-1.8	0.8	-3.3
Saudi Arabia	11.41	14.26	9.93	8.86	8.84	8.81	3.8	-5.8	-2.8	-0.2	-0.4	-1.4
European Union	8.46	9.56	10.40	11.58	11.64	11.72	2.0	1.4	2.7	0.6	0.7	1.8

MIDDLE EAST: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	1135.2	994.5	719.5	958.9	942.2	1031.0	-2.2	-5.3	7.4	-1.7	9.4
Solids	0.7	0.6	0.8	0.8	0.9	0.9	-4.7	5.8	0.7	7.8	0.0
Oil	1105.6	960.3	652.4	867.3	853.1	932.4	-2.3	-6.2	7.4	-1.6	9.3
Natural gas	27.7	31.9	64.5	89.1	86.5	95.9	2.4	12.4	8.4	-2.9	10.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.4	0.8	0.9	0.9	0.9	1.0	12.3	1.0	0.6	-4.0	11.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.8	0.9	0.9	0.8	0.8	0.8	1.3	-0.5	-1.4	0.2	0.1
Net Imports	-1041.4	-854.2	-501.0	-700.6	-693.1	-749.3	-3.3	-8.5	8.7	-1.1	8.1
Solids	0.1	0.0	2.1	2.8	2.7	3.1	-3.3	89.1	7.9	-3.2	15.0
Oil	-1034.7	-851.8	-500.8	-698.5	-690.3	-749.2	-3.2	-8.5	8.7	-1.2	8.5
Crude oil	*-994.2*	*-817.4*	*-443.0*	*-626.3*	*-640.8*	*-692.9*	*-3.2*	*-9.7*	*9.0*	*2.3*	*8.1*
Oil products	*-40.5*	*-34.4*	*-57.8*	*-72.2*	*-49.5*	*-56.4*	*-2.7*	*9.1*	*5.7*	*-31.5*	*13.9*
Natural gas	-6.8	-2.4	-2.2	-4.8	-5.4	-3.1	-15.8	-2.0	22.0	14.0	-43.3
Electricity	0.0	0.0	-0.1	0.0	-0.1	-0.1	-	-	-	-	0.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	69.0	128.9	210.4	245.9	233.8	248.6	11.0	8.5	4.0	-4.9	6.3
Solids	0.8	0.6	2.9	3.4	3.6	4.3	-4.6	30.2	4.0	7.0	18.9
Oil	46.2	97.0	143.4	156.5	147.5	152.8	13.2	6.7	2.2	-5.8	3.6
Natural gas	20.9	29.5	62.4	84.3	81.1	90.6	6.0	13.3	7.8	-3.8	11.7
Other *(1)*	1.2	1.7	1.7	1.7	1.6	0.8	5.6	-0.2	-0.2	-3.5	-48.0
Electricity Generation in TWh	41.2	95.6	184.4	237.5	228.5	na	15.1	11.6	6.5	-3.8	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	4.8	9.7	10.3	10.5	10.1	na	12.3	1.0	0.5	-3.9	na
Thermal	36.4	85.9	174.1	227.0	218.4	na	15.4	12.5	6.9	-3.8	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	10.3	25.0	46.6	55.3	51.5	na	16.0	10.9	4.4	-6.9	na
Solids	0.0	0.0	2.0	2.4	2.5	na	0.0	0.0	3.6	7.7	na
Oil	7.7	16.0	26.6	27.4	25.3	na	12.8	8.9	0.7	-7.4	na
Gas	2.5	9.1	18.0	25.6	23.6	na	23.7	12.0	9.2	-7.7	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	30.5	29.5	32.1	35.3	36.5	na	-0.5	1.4	2.4	3.3	na
Non-Energy Uses	1.5	3.5	5.5	6.2	5.2	na	15.5	7.7	3.2	-17.0	na
Total Final Energy Demand	48.0	86.4	140.0	161.7	158.4	na	10.3	8.4	3.7	-2.0	na
Solids	0.8	0.6	0.8	1.0	1.1	na	-4.6	5.7	5.7	8.7	na
Oil	29.4	67.3	98.2	110.8	110.4	na	14.8	6.5	3.1	-0.4	na
Gas	14.0	11.0	26.7	32.5	29.8	na	-4.0	16.0	5.0	-8.1	na
Electricity	3.0	6.7	13.4	16.6	16.3	na	14.0	12.3	5.6	-2.0	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.8	0.9	0.9	0.8	0.8	na	1.4	-0.5	-1.5	0.2	na
CO2 Emissions in Mt of CO2											
Total	165	329	545	643	628	na	12.1	8.8	4.2	-2.3	na
Excluding Bunkers and Air Transport	155	311	524	622	611	na	12.4	9.1	4.4	-1.7	na
Indicators											
Population (Million)	79.8	97.8	120.6	137.1	143.0	146.7	3.4	3.6	3.3	4.3	2.5
GDP (Index 1985 = 100)	80.1	92.4	95.6	107.8	106.9	107.3	2.4	0.6	3.0	-0.8	0.3
Gross Inl. Consumption/GDP (toe/1985 MECU)	143	232	366	380	364	386	8.3	7.9	0.9	-4.2	6.0
Gross Inl. Consumption/Capita (toe/inhabitant)	0.87	1.32	1.74	1.79	1.63	1.69	7.3	4.8	0.7	-8.9	3.7
Electricity Generated/Capita (kWh/inhabitant)	517	978	1529	1732	1597	na	11.2	7.7	3.2	-7.8	na
CO2 Emissions/Capita (t of CO2/inhabitant) (3)	3.05	3.70	4.76	4.97	4.73	na	3.3	4.3	1.1	-4.9	na
Import Dependency (%)	-1104	-611	-228	-271	-278	-284	-9.4	-15.2	4.4	2.6	2.4

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

IRAN: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	324.7	82.7	108.2	184.4	196.3	207.6	-20.4	4.6	14.2	6.5	5.8
Solids	0.7	0.6	0.8	0.8	0.9	0.9	-4.7	5.8	0.7	7.8	4.0
Oil	305.7	75.1	93.3	158.5	170.3	181.0	-20.9	3.7	14.2	7.4	6.3
Natural gas	17.4	6.0	12.7	23.9	23.9	24.4	-16.3	13.4	17.0	0.0	2.1
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.3	0.5	0.6	0.5	0.6	0.7	9.3	5.0	-5.1	16.1	11.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.6	0.6	0.7	0.7	0.7	0.7	1.2	2.5	-1.8	0.3	0.1
Net Imports	-287.7	-44.0	-49.4	-107.9	-121.7	-131.0	-26.9	2.0	21.5	12.8	7.7
Solids	0.0	0.0	0.1	0.2	0.2	0.3	-3.6	16.4	27.9	0.0	5.0
Oil	-281.0	-43.9	-49.5	-106.3	-119.4	-128.7	-26.6	2.0	21.0	12.3	7.8
Crude oil	*-272.6*	*-38.2*	*-56.7*	*-113.1*	*-126.2*	*-136.4*	*-27.9*	*6.8*	*18.8*	*11.6*	*8.1*
Oil products	*-8.4*	*-5.7*	*7.2*	*6.7*	*6.8*	*7.7*	*-6.3*	-	*-1.6*	*0.6*	*13.9*
Natural gas	-6.8	-0.2	0.0	-1.8	-2.5	-2.6	-45.2	-100.0	0.0	42.2	2.0
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	29.6	37.7	57.2	73.9	72.0	76.6	4.1	7.2	6.6	-2.6	6.4
Solids	0.8	0.6	0.9	1.0	1.1	1.2	-4.6	6.6	4.7	5.9	4.2
Oil	17.4	30.2	42.3	49.6	48.3	52.3	9.6	5.8	4.1	-2.6	8.3
Natural gas	10.6	5.8	12.7	22.1	21.3	21.8	-9.5	14.0	14.7	-3.4	2.1
Other *(1)*	0.9	1.1	1.4	1.2	1.3	1.4	4.2	3.6	-3.3	7.2	5.5
Electricity Generation in TWh	13.6	22.4	41.6	59.1	59.7	na	8.7	10.9	9.2	1.0	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	3.3	5.6	7.5	6.1	7.1	na	9.3	5.0	-5.2	16.0	na
Thermal	10.3	16.8	34.1	53.0	52.7	na	8.5	12.5	11.7	-0.7	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	2.8	4.5	9.0	13.3	14.2	na	7.8	12.5	10.2	6.7	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	2.1	3.0	6.9	5.4	5.5	na	6.3	14.8	-6.0	2.8	na
Gas	0.8	1.4	2.1	7.9	8.7	na	11.6	6.8	38.7	9.4	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	31.2	32.4	32.5	34.3	31.9	na	0.6	0.1	1.4	-7.0	na
Non-Energy Uses	0.8	1.3	2.0	2.4	2.2	na	8.8	7.7	4.2	-5.1	na
Total Final Energy Demand	24.4	28.0	44.9	58.5	59.3	na	2.3	8.2	6.8	1.4	na
Solids	0.8	0.6	0.8	1.0	1.1	na	-4.6	5.9	5.5	9.1	na
Oil	12.2	20.8	29.8	39.4	41.3	na	9.2	6.2	7.2	4.8	na
Gas	9.8	4.4	10.6	13.5	12.0	na	-12.7	16.0	6.3	-11.1	na
Electricity	1.0	1.7	3.0	3.9	4.2	na	8.7	10.2	7.1	9.0	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0.6	0.6	0.7	0.7	0.7	na	1.2	2.5	-1.8	0.3	na
CO2 Emissions in Mt of CO2											
Total	74	90	148	196	201	na	3.4	8.7	7.3	2.4	na
Excluding Bunkers and Air Transport	70	88	146	195	200	na	3.8	8.9	7.4	2.4	na
Indicators											
Population (Million)	32.5	39.3	49.4	54.6	57.7	59.3	3.2	3.9	2.5	5.7	2.7
GDP (Index 1985 = 100)	98.2	79.2	84.9	90.5	94.0	97.4	-3.5	1.2	1.6	3.8	3.6
Gross Inl. Consumption/GDP (toe/1985 MECU)	127	200	283	342	321	330	7.9	6.0	4.9	-6.1	2.7
Gross Inl. Consumption/Capita (toe/inhabitant)	0.91	0.96	1.16	1.35	1.25	1.29	0.8	3.2	4.0	-7.8	3.5
Electricity Generated/Capita (kWh/inhabitant)	418	569	841	1082	1034	na	5.3	6.7	6.5	-4.4	na
CO2 Emissions/Capita (t of CO2/inhabitant) (3)	2.84	2.41	3.09	3.74	3.62	na	-2.7	4.2	4.9	-3.2	na
Import Dependency (%)	-2394	-337	-252	-421	-486	-171	-27.9	-4.7	13.6	15.5	-64.8

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

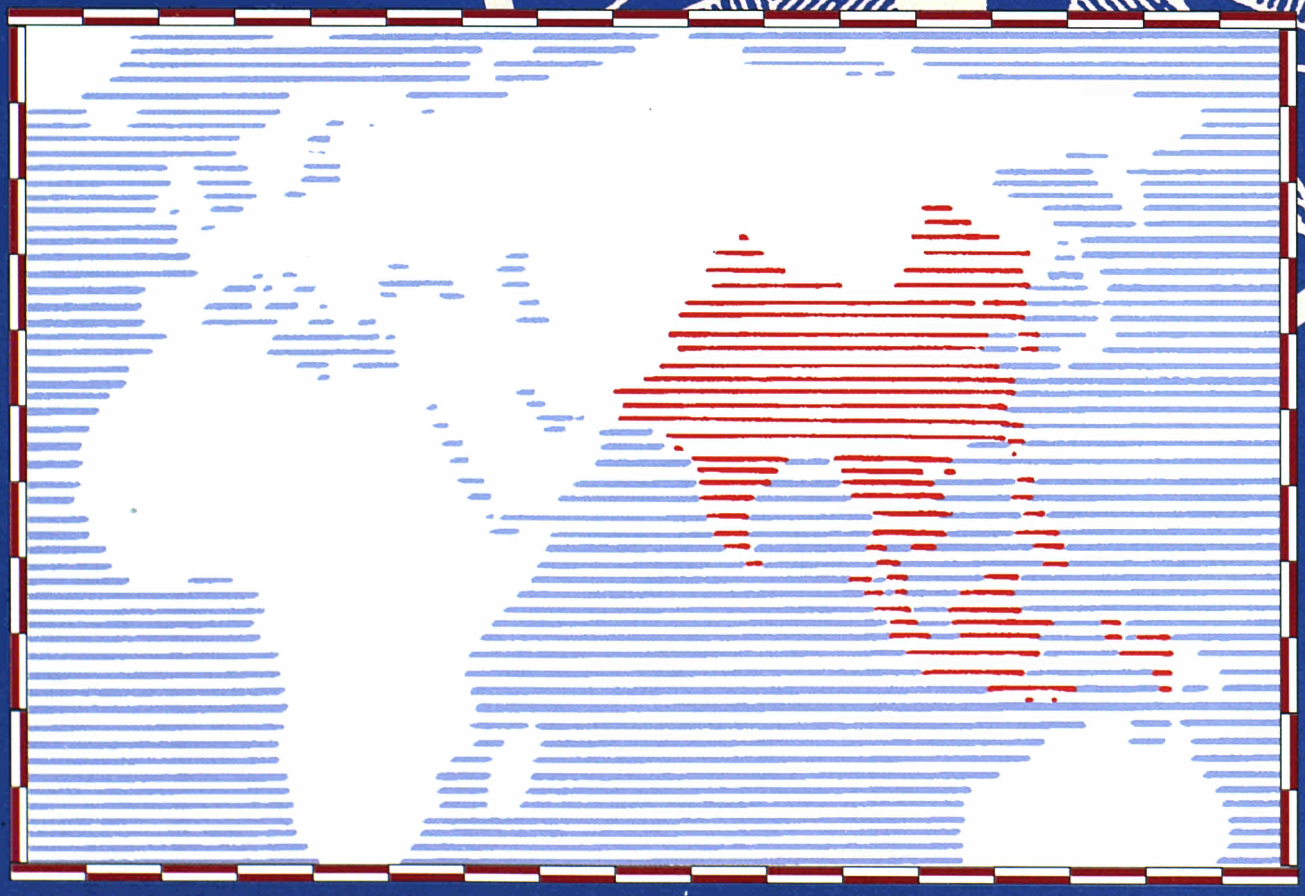
SAUDI ARABIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	421.8	518.7	277.0	361.3	461.2	470.3	3.5	-9.9	6.9	27.7	2.0
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oil	418.6	510.2	255.9	335.9	434.4	442.6	3.4	-10.9	7.0	29.3	1.9
Natural gas	3.2	8.5	21.1	25.4	26.8	27.7	17.6	16.3	4.7	5.8	3.1
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0	0	0	0	0	0	-	-	-	-	-
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Net Imports	-398.2	-479.2	-208.9	-285.9	-386.8	-420.6	3.1	-12.9	8.2	35.3	8.7
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oil	-398.2	-479.2	-208.9	-285.9	-386.8	-420.6	3.1	-12.9	8.2	35.3	8.7
Crude oil	*-390.2*	*-475.3*	*-193.2*	*-252.3*	*-346.0*	*-374.1*	*3.3*	*-13.9*	*6.9*	*37.2*	*8.1*
Oil products	*-8.0*	*-4.0*	*-15.7*	*-33.6*	*-40.8*	*-46.5*	*-11.1*	*25.8*	*21.0*	*21.3*	*13.9*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0	0	0	0	0	0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	10.1	35.5	66.5	72.5	71.5	70.1	23.3	11.0	2.2	-1.3	-2.0
Solids	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oil	6.9	27.0	45.3	47.2	44.7	42.5	25.6	9.0	1.0	-5.2	-5.1
Natural gas	3.2	8.5	21.1	25.4	26.8	27.7	17.6	16.3	4.7	5.8	3.1
Other *(1)*	0	0	0	0	0	0	-	-	-	-	-
Electricity Generation in TWh	3.7	20.5	47.6	64.9	66.0	na	32.8	15.1	8.0	1.7	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0	0	0	0	0	0	-	-	-	-	-
Thermal	3.7	20.5	47.6	64.9	66.0	na	32.8	15.1	8.0	1.7	na
Generation Capacity in GWe	1.0	4.8	14.5	18.5	na	na	na	na	na	na	na
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0	0	0	0	0	0	-	-	-	-	-
Thermal	1.0	4.8	14.5	18.5	na	na	na	na	na	na	na
Average Load Factor in %	42.8	48.4	37.6	40.0	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	1.1	5.6	13.8	15.7	15.7	na	31.9	16.3	3.3	-0.5	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	1.1	3.4	7.7	9.3	9.2	na	21.5	14.5	4.9	-0.9	na
Gas	0.0	2.2	6.1	6.4	6.4	na	0.0	18.8	1.3	0.0	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	30.3	31.5	29.7	35.5	36.2	na	0.6	-1.0	4.5	2.2	na
Non-Energy Uses	0.0	0.7	1.5	1.6	1.6	na	-	12.5	1.1	2.9	na
Total Final Energy Demand	4.4	22.5	43.3	43.6	44.3	na	31.2	11.5	0.2	1.5	na
Solids	0	0	0	0	0	na	-	-	-	-	na
Oil	3.8	21.0	33.1	31.8	30.9	na	32.9	7.9	-1.0	-2.8	na
Gas	0.3	0.5	6.8	7.5	9.0	na	6.3	56.5	2.7	19.4	na
Electricity	0.3	1.1	3.4	4.3	4.4	na	24.3	20.6	6.5	1.5	na
Heat	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
CO2 Emissions in Mt of CO2											
Total	20	94	174	186	187	na	29.1	10.7	1.6	0.4	na
Excluding Bunkers and Air Transport	20	90	168	181	182	na	28.8	11.0	1.8	0.6	na
Indicators											
Population (Million)	7.0	9.4	12.1	14.9	14.9	15.0	5.1	4.3	5.4	0.4	0.4
GDP (Index 1985 = 100)	70.0	117.6	105.6	115.9	116.2	116.2	9.0	-1.8	2.4	0.2	0.0
Gross Inl. Consumption/GDP (toe/1985 MECU)	127	266	554	551	542	531	13.1	13.0	-0.2	-1.6	-2.0
Gross Inl. Consumption/Capita (toe/inhabitant)	1.45	3.79	5.51	4.88	4.79	4.68	17.4	6.4	-3.0	-1.7	-2.4
Electricity Generated/Capita (kWh/inhabitant)	536	2183	3947	4364	4421	na	26.4	10.4	2.5	1.3	na
CO2 Emissions/Capita (t of CO2/inhabitant) (3)	8.85	11.47	15.00	13.10	13.10	na	4.4	4.6	-3.3	0.0	na
Import Dependency (%)	-1691	-1206	-304	-379	-520	-600	-5.5	-20.5	5.7	37.0	15.4

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass

PART X

ASIA



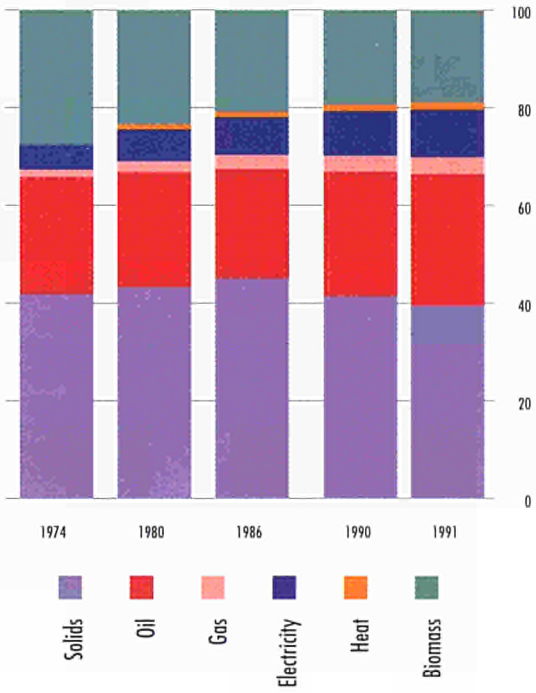
PART X

ASIA

This is the largest world region, and includes all Asian countries and the Pacific islands, except those belonging to the OECD region, Iran and the Asian Republics of the former USSR. The Asian population has grown by 2% per year on average in the period, and now is almost 60% of the world total. China and India accounted in 1992, for 23% and 17% of world population respectively. Despite GDP growth of 8% per year in the period since 1974, the region is still in a rather low level of economic development (GDP per capita in 1992 was eighteen times lower than the European Union average). However, there are the four NICs which enjoyed in 1992, a GDP per capita only 44% below the European average, a figure which is much higher than some European Union Member States. China and India both have some of the lowest GDP per capita in the region. These economic disparities correspond to different levels of energy demand and of primary fuel mix.

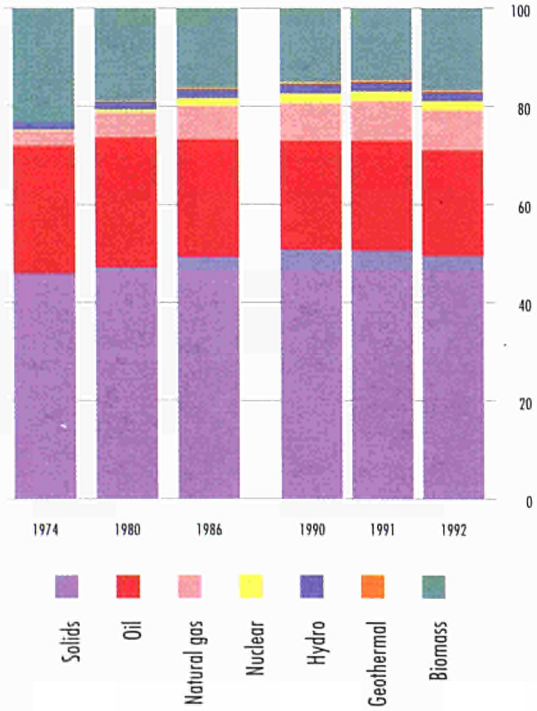
Due to fast and sometilmes spectacular economic growth, **final energy consumption** has increased steadily by almost 5% per year to 1991. This growth was satisfied by solid fuels (37% of the overall increment), oil (30%), electricity (14%), biomass (11%), gas (5%) and derived heat (3% of the overall increment). The growth in solid fuels was due to developments in China which alone accounted for 81% of the increase in demand for these fuels. The increase in oil demand was more or less shared by all countries, although the NICs took 34% of the increase; China and India took about 20% each. The growth in electricity consumption resulted mainly from China (almost half of the increment since 1974), followed by the NICs and India with 19% and 17% respectively. The increase in demand for non-commercial fuels (biomass) occurred mainly in "Other Asia" (almost half of the growth); China and India took 23% and 34% of the increase. On the other hand, reflecting fast industrialisation and improved standards of living, the consumption of biomass in the NICs dropped five fold to a level accounting only for 0.5% of total final demand in 1991 (10% in 1974).

FINAL ENERGY DEMAND: FUEL SHARES



Due to fast rising final demand, Asian **gross inland energy consumption** grew in the period by over 5% per year on average since 1974. This growth was shared by all primary fuels. The average annual growth of each fossil fuel by rank order was: Natural gas (10.6%); Solids (5.7%); and Oil (5.5%). Nuclear energy was developed rapidly in the 1980s (growing over 20% per year on average) but practically stabilised in 1991 and 1992. Renewable energy sources (mainly biomass) had a steady increase since 1974 of over 3% per year. In 1992, the shares of each primary fuel in total consumption was: Solids with 48% (46% in 1974); Oil with 27% (as in 1974); Renewable sources with 18% (25% in 1974); Natural gas with 5% (2% in 1974); and nuclear with 2% (almost nil in 1974).

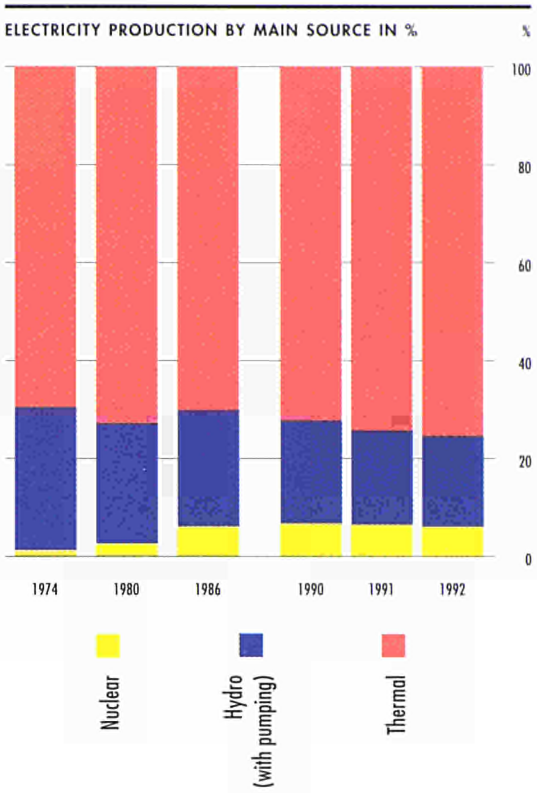
PRIMARY PRODUCTION: FUEL SHARES



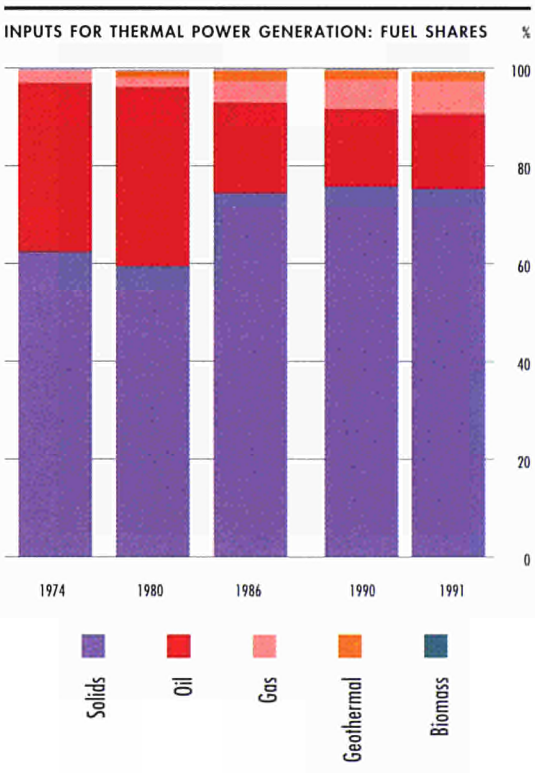
Indigenous **energy production** in this region was mainly a function of its own economic development need, and relatively independent from the evolution of the prices of internationally-traded coal, oil and natural gas. Thus, total energy production has increased in line with gross inland consumption by about 5% per year. Production is dominated by solid fuels with 50% of total production in 1992 (46% in 1974). This development is due to China which has significant coal reserves. The share of oil decreased from 26% in 1974 to 21% in 1992. China was the biggest oil producer in 1992 followed by "Other" (Indonesia). Natural gas production has increased continuously in the period by 11% per year on average. In this case, the "Other Asia" (Indonesia and Malaysia) is mainly responsible for this increase. Nuclear energy production is dominated by the NICs (93% of total nuclear energy in 1992). Hydro power has grown slower than most other fuels and in 1992 it accounted for approximately the same share as nuclear. Biomass production increased 3% per year in the period. This growth occurred in all Asian countries except for the NICs.

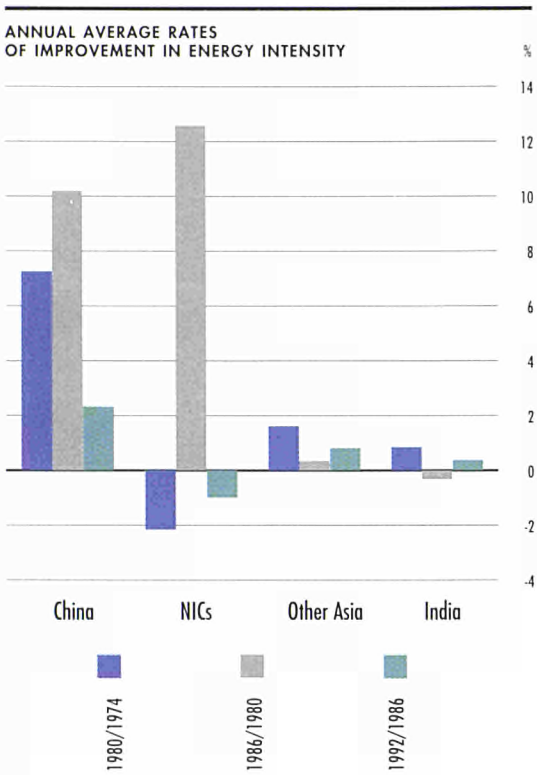
Although its dependency in 1992 was less than 9%, Asia is increasingly a net **importer of energy.** This is true for solids and oil. It is increasingly a net exporter of natural gas (12% per year growth). In 1992, gas exports accounted for 31% of indigenous production. At country level, this picture is different. China is a net exporter of solids and oil and a small net importer of electricity. India, however, is a net importer of all commercial energy sources except natural gas. "Other Asia" is a net importer of solid fuels and oil products, but exports crude oil and natural gas. The NICs are an important net energy importer. Indeed, they depended on foreign supplies for 83% of their consumption in 1991. From 1974 to 1991, their net energy imports have increased by an annual average of 8%. Also reflecting their relatively advanced stage of development, they are importers of crude oil (77% of total imports in 1991), but exporters of finished oil products.

Electricity generation in the region has grown steadily by 9% per year in the period. Thermal generation dominates electricity production (76% in 1992). In 1992, nuclear and hydro accounted for 6% and 18% of total generation. Generation in China is also dominated by thermal units (82% of total); Hydro accounted for 18% of generation in 1992 and nuclear was still negligible. In the case of India, hydro power and nuclear accounted, in 1991, for 22% and 2% of total generation respectively. In the NICs, nuclear accounted for 35% of generation in 1991, while hydro power and thermal units represented 4% and 61% respectively.



The increment of **inputs for thermal generation** of electricity have been dominated by solid fuels. In 1991, solid fuels accounted for more than three quarters of thermal generation; Oil and gas represented 15% and 7% respectively. The share of geothermal and biomass together was 2% in 1991. While in China and India, solids form the bulk of fuel inputs, in the NICs and "Other Asia" the fuel mix is more diversified. In the NICs in 1991, the shares are: Solids (47%); Oil (45%); and Gas (8%). In the case of "Other Asia" the shares in 1991 were: Solids (32%); Oil (31%); Gas (26%); and geothermal and biomass (11%).





The **energy intensity** indicator for the region has been improving (negative growth rates) significantly since 1974. This evolution is due mainly to China (-7% per year) up to 1990. In 1992, China was the most intensive country (83% higher than the Asian average) while the NICs presented the lowest ratio (52% below Asian average). Compared to the European Union, China was five times more intensive and the NICs only 35% higher.

The ratio of gross inland consumption to population is rather low compared to Europe (85% below). The lowest level occurred in India (91% below Europe), while the NICs had the highest ratio at only 25% below that of the European union.

Below are the summary tables for the region as a whole, China, India, the NICs and Other.

ASIA: MAIN INDICATORS

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
ASIA	1315	1221	902	834	819	826	-1.2	-4.9	-1.9	-1.9	0.9	-2.5
China	5230	3325	1742	1556	1511	1511	-7.3	-10.2	-2.8	-2.9	0.0	-6.7
India	707	670	684	662	658	668	-0.9	0.3	-0.8	-0.7	1.5	-0.3
NICs	742	844	376	383	389	399	2.2	-12.6	0.4	1.8	2.5	-3.4
Other	811	735	719	673	670	684	-1.6	-0.4	-1.6	-0.5	2.1	-0.9
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inland Consumption per Capita (toe/inhabitant)												
ASIA	0.31	0.39	0.44	0.51	0.51	0.53	4.0	2.0	3.4	1.2	4.4	3.1
China	0.33	0.45	0.55	0.62	0.62	0.64	5.1	3.4	2.9	0.1	4.0	3.7
India	0.20	0.21	0.26	0.30	0.31	0.32	1.2	3.4	3.6	1.8	3.4	2.6
NICs	0.78	1.28	1.65	2.22	2.41	2.62	8.5	4.4	7.7	8.6	8.6	6.9
Other	0.35	0.41	0.36	0.40	0.40	0.42	2.5	-2.0	2.8	0.6	4.5	1.1
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9	0.4
GDP/Capita (thousand 1985 ECU/inhabitant)												
ASIA	0.24	0.32	0.49	0.61	0.62	0.65	5.3	7.3	5.4	3.1	3.4	5.8
China	0.06	0.14	0.32	0.40	0.41	0.42	13.3	15.1	5.8	3.1	4.0	11.1
India	0.28	0.32	0.38	0.45	0.46	0.47	2.1	3.1	4.5	2.5	1.8	3.0
NICs	1.06	1.51	4.39	5.81	6.20	6.57	6.2	19.4	7.2	6.7	5.9	10.7
Other	0.43	0.55	0.50	0.60	0.60	0.62	4.3	-1.6	4.5	1.2	2.4	2.0
European Union	8.46	9.56	10.40	11.58	11.64	11.72	2.0	1.4	2.7	0.6	0.7	1.8

ASIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	612.0	857.7	1157.1	1354.4	1391.7	1471.8	5.8	5.1	4.0	2.8	5.8
Solids	282.9	404.4	571.4	688.5	703.9	730.6	6.1	5.9	4.8	2.2	3.8
Oil	158.4	226.8	277.4	300.7	311.4	315.7	6.2	3.4	2.0	3.6	1.4
Natural gas	18.5	43.9	79.3	105.2	113.1	121.5	15.6	10.3	7.3	7.5	7.4
Nuclear	0.7	3.8	15.8	24.0	25.4	25.5	32.9	26.7	11.0	5.7	0.3
Hydro	9.3	13.6	20.4	25.5	25.4	26.3	6.5	7.0	5.7	-0.5	3.8
Geothermal	0.0	1.8	4.1	5.7	5.9	6.1	0.0	15.1	8.2	3.9	4.0
Biomass	142.3	163.4	188.7	204.9	206.7	246.0	2.3	2.4	2.1	0.9	19.0
Net Imports	12.7	20.8	13.5	89.7	98.9	131.3	8.6	-7.0	60.6	10.3	32.8
Solids	-0.9	7.0	26.2	30.9	30.6	27.1	-	24.5	4.3	-1.2	-11.5
Oil	18.8	31.9	21.1	96.0	105.2	142.2	9.2	-6.7	46.0	9.6	35.1
Crude oil	*13.8*	*23.0*	*23.6*	*73.4*	*85.4*	*115.1*	*8.9*	*0.4*	*32.8*	*16.4*	*34.8*
Oil products	*5.0*	*8.9*	*-2.5*	*22.7*	*19.8*	*27.1*	*10.0*	-	-	*-12.5*	*36.5*
Natural gas	-5.2	-18.1	-33.7	-37.3	-36.9	-37.9	23.0	11.0	2.5	-1.2	2.7
Electricity	0.0	0.0	0.0	0.0	0.0	-0.1	-	-	-	310.0	50.0
Biomass	0.0	-0.1	-0.1	0.0	0.0	0.0	-	-	-	-	-
Gross Inland Consumption	612.6	868.4	1149.7	1407.9	1457.1	1547.2	6.0	4.8	5.2	3.5	6.2
Solids	281.5	413.3	589.9	711.8	724.8	757.7	6.6	6.1	4.8	1.8	4.5
Oil	165.5	246.8	285.5	368.1	393.0	430.4	6.9	2.5	6.6	6.7	9.5
Natural gas	13.3	25.9	45.4	67.9	76.0	82.0	11.8	9.8	10.6	12.0	7.9
Other (1)	152.3	182.5	229.0	260.1	263.3	277.2	3.1	3.9	3.2	1.3	5.3
Electricity Generation in TWh	369.6	643.3	1001.4	1415.4	1537.9	1660.9	9.7	7.7	9.0	8.7	8.0
Nuclear	2.7	14.7	60.7	92.1	97.4	97.7	32.9	26.7	11.0	5.7	0.3
Hydro	108.0	157.9	237.1	296.4	295.0	306.3	6.5	7.0	5.7	-0.5	3.8
Thermal	258.9	470.7	703.5	1026.9	1145.5	1256.9	10.5	6.9	9.9	11.6	9.7
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	76.0	141.9	202.3	297.7	329.9	na	11.0	6.1	10.1	10.8	na
Solids	48.0	85.0	151.3	226.3	250.2	na	10.0	10.1	10.6	10.6	na
Oil	26.0	51.9	37.4	47.4	50.9	na	12.2	-5.3	6.1	7.4	na
Gas	1.9	2.9	9.1	17.8	22.3	na	7.0	21.0	18.4	25.7	na
Geothermal	0.0	1.8	4.1	5.7	5.9	na	0.0	15.1	8.2	3.9	na
Biomass	0.1	0.3	0.4	0.5	0.5	na	11.1	8.3	7.5	1.1	na
Average Thermal Efficiency in %	29.3	28.5	29.9	29.7	29.9	na	-0.4	0.8	-0.2	0.7	na
Non-Energy Uses	4.0	13.2	14.9	14.4	15.7	na	22.3	2.1	-0.9	9.2	na
Total Final Energy Demand	512.8	694.0	902.8	1068.5	1088.3	na	5.2	4.5	4.3	1.9	na
Solids	215.5	300.9	407.2	444.4	430.8	na	5.7	5.2	2.2	-3.1	na
Oil	122.0	162.5	201.6	272.0	292.3	na	4.9	3.7	7.8	7.4	na
Gas	7.3	15.2	25.8	35.4	37.2	na	12.9	9.3	8.2	5.2	na
Electricity	25.9	45.0	70.1	97.5	105.6	na	9.7	7.6	8.6	8.2	na
Heat	0.0	7.4	9.9	14.8	16.3	na	0.0	5.0	10.6	10.3	na
Biomass	142.2	163.1	188.2	204.4	206.2	na	2.3	2.4	2.1	0.9	na
CO2 Emissions in Mt of CO2											
Total	1536	2264	3060	3800	3928	na	6.7	5.1	5.6	3.4	na
Excluding Bunkers and Air Transport	1517	2240	3028	3756	3884	na	6.7	5.2	5.5	3.4	na
Indicators											
Population (Million)	1976	2214	2596	2784	2848	2897	1.9	2.7	1.8	2.3	1.7
GDP (Index 1985 = 100)	39.1	59.7	107.0	141.6	149.3	157.1	7.3	10.2	7.3	5.5	5.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	1315	1221	902	834	819	826	-1.2	-4.9	-1.9	-1.9	0.9
Gross Inl. Consumption/Capita (toe/inhabitant)	0.31	0.39	0.44	0.51	0.51	0.53	4.0	2.0	3.4	1.2	4.4
Electricity Generated/Capita (kWh/inhabitant)	187	291	386	508	540	na	7.6	4.8	7.1	6.2	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.78	1.02	1.18	1.36	1.38	na	4.7	2.4	3.7	1.1	na
Import Dependency (%)	2.0	2.4	1.2	6.3	6.7	8.3	2.5	-11.2	52.6	6.4	23.9

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

CHINA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	310.4	464.8	634.2	739.7	747.1	775.0	7.0	5.3	3.9	1.0	3.7
Solids	202.4	303.9	438.1	529.1	532.8	556.8	7.0	6.3	4.8	0.7	4.5
Oil	66.0	107.9	133.0	140.8	143.5	145.8	8.5	3.6	1.4	1.9	1.6
Natural gas	6.3	12.0	11.5	12.8	13.4	13.6	11.3	-0.6	2.7	5.0	1.5
Nuclear	0	0	0	0	0	0.1	-	-	-	-	-
Hydro	3.7	5.0	8.1	10.9	10.8	11.6	5.2	8.4	7.6	-1.3	7.4
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	32.0	36.1	43.5	46.1	46.6	47.0	2.0	3.2	1.5	1.0	1.0
Net Imports	-7.1	-19.8	-34.3	-32.0	-27.8	-33.9	18.7	9.6	-1.7	-13.0	21.8
Solids	-1.7	-2.3	-2.7	-8.4	-9.9	-15.6	5.2	2.7	32.6	18.0	57.6
Oil	-5.4	-17.5	-31.6	-23.8	-18.2	-18.6	21.7	10.4	-6.9	-23.5	2.5
Crude oil	*-5.2*	*-13.2*	*-28.5*	*-21.4*	*-16.9*	*-17.3*	*16.9*	*13.8*	*-6.9*	*-21.1*	*2.5*
Oil products	*-0.2*	*-4.3*	*-3.1*	*-2.3*	*-1.3*	*-1.3*	*63.2*	*-5.3*	*-7.0*	*-45.6*	*2.5*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.0	0.0	0.1	0.2	0.2	0.3	0.0	0.0	11.8	55.7	35.0
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	303.3	448.2	589.7	699.9	711.2	749.0	6.7	4.7	4.4	1.6	5.3
Solids	200.7	306.6	429.0	515.4	517.5	541.3	7.3	5.8	4.7	0.4	4.6
Oil	60.6	88.6	97.5	114.6	122.7	133.3	6.5	1.6	4.1	7.0	8.7
Natural gas	6.3	12.0	11.5	12.8	13.4	13.6	11.3	-0.6	2.7	5.0	1.5
Other *(1)*	35.7	41.1	51.7	57.1	57.6	60.8	2.3	3.9	2.5	0.7	5.6
Electricity Generation in TWh	168.8	300.6	449.5	621.2	680.4	748.4	10.1	6.9	8.4	9.5	10.0
Nuclear	0	0	0	0	0	0.4	-	-	-	-	-
Hydro	43.0	58.2	94.5	126.7	125.1	134.3	5.2	8.4	7.6	-1.3	7.4
Thermal	125.8	242.4	355.0	494.5	555.3	613.7	11.6	6.6	8.6	12.3	10.5
Generation Capacity in GWe	37.9	65.8	93.8	na	na	na	9.7	6.1	na	na	na
Nuclear	0	0	0	0	0	na	-	-	-	-	-
Hydro	12.5	20.3	27.6	na	na	na	8.4	5.3	na	na	na
Thermal	25.4	45.6	66.2	na	na	na	10.2	6.4	na	na	na
Average Load Factor in %	50.9	52.1	54.7	na	na	na	0.4	0.8	na	na	na
Fuel Inputs for Thermal Power Generation	38.8	78.3	103.6	154.2	170.0	na	12.4	4.8	10.4	10.2	na
Solids	31.2	57.9	86.5	138.0	153.2	na	10.8	6.9	12.4	11.0	na
Oil	7.5	20.2	16.4	15.2	15.4	na	17.9	-3.4	-1.9	0.9	na
Gas	0.0	0.2	0.7	0.9	1.4	na	0.0	26.1	5.9	56.8	na
Geothermal	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Biomass	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Average Thermal Efficiency in %	27.9	26.6	29.5	27.6	28.1	na	-0.8	1.7	-1.6	1.9	na
Non-Energy Uses	0.0	8.5	8.9	7.0	7.0	na	0.0	0.8	-5.7	-1.0	na
Total Final Energy Demand	251.8	352.8	472.1	535.1	535.4	na	5.8	5.0	3.2	0.1	na
Solids	155.7	230.5	318.2	345.0	329.8	na	6.8	5.5	2.0	-4.4	na
Oil	49.3	50.7	59.5	74.4	82.9	na	0.5	2.7	5.7	11.4	na
Gas	2.8	6.8	8.3	10.8	11.4	na	15.6	3.5	6.8	5.2	na
Electricity	12.0	21.3	32.7	44.0	48.5	na	10.1	7.4	7.6	10.2	na
Heat	0.0	7.4	9.9	14.8	16.3	na	0.0	5.0	10.6	10.3	na
Biomass	32.0	36.1	43.5	46.1	46.6	na	2.0	3.2	1.5	1.0	na
CO2 Emissions in Mt of CO2											
Total	927	1396	1872	2234	2262	na	7.1	5.0	4.5	1.3	na
Excluding Bunkers and Air Transport	926	1395	1870	2230	2257	na	7.1	5.0	4.5	1.2	na
Indicators											
Population (Million)	909	996	1074	1138	1155	1170	1.5	1.3	1.5	1.5	1.3
GDP (Index 1985 = 100)	18.5	43.0	107.9	143.3	150.0	157.9	15.1	16.6	7.4	4.6	5.3
Gross Inl. Consumption/GDP (toe/1985 MECU)	5230	3325	1742	1556	1511	1511	-7.3	-10.2	-2.8	-2.9	0.0
Gross Inl. Consumption/Capita (toe/inhabitant)	0.33	0.45	0.55	0.62	0.62	0.64	5.1	3.4	2.9	0.1	4.0
Electricity Generated/Capita (kWh/inhabitant)	186	302	419	546	589	na	8.4	5.6	6.9	7.9	na
CO2 Emissions/Capita (t of CO2/inhabitant)	1.02	1.41	1.75	1.97	1.96	na	5.5	3.7	3.0	-0.2	na
Import Dependency (%)	-2.3	-4.4	-5.8	-4.6	-3.9	-4.5	11.1	4.7	-5.8	-14.4	16.0

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

INDIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	100.4	123.6	183.3	222.3	230.6	229.3	3.5	6.8	4.9	3.7	-0.5
Solids	44.9	58.1	81.3	104.3	113.2	113.4	4.4	5.8	6.4	8.5	0.2
Oil	7.7	9.6	32.3	34.9	32.9	29.7	3.9	22.4	2.0	-5.8	-9.6
Natural gas	0.8	1.2	5.4	10.2	11.5	11.3	8.1	27.6	17.5	12.3	-1.4
Nuclear	0.6	0.8	1.3	1.6	1.4	1.7	5.3	9.0	4.9	-10.9	20.1
Hydro	2.4	4.0	4.6	5.7	5.8	5.4	8.9	2.5	5.2	2.2	-7.2
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	44.0	49.8	58.3	65.6	65.8	67.8	2.1	2.7	3.0	0.3	3.0
Net Imports	16.8	24.2	16.8	30.4	34.2	na	6.3	-5.9	16.0	12.4	na
Solids	-0.3	0.3	1.2	3.5	3.6	na	-	27.5	29.9	3.6	na
Oil	17.0	23.9	15.6	26.9	30.5	na	5.8	-6.9	14.6	13.5	na
Crude oil	*14.3*	*16.3*	*14.8*	*21.3*	*22.3*	*na*	*2.3*	*-1.6*	*9.5*	*4.9*	*na*
Oil products	*2.7*	*7.6*	*0.8*	*5.6*	*8.2*	*na*	*18.4*	*-31.3*	*63.1*	*46.1*	*na*
Natural gas	0	0	0	0	0	na	-	-	-	-	na
Electricity	0.0	0.0	0.0	0.1	0.1	na	26.0	-	71.6	5.1	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Gross Inland Consumption	116.1	143.6	199.5	248.4	259.7	273.7	3.6	5.6	5.6	4.5	5.4
Solids	44.5	56.3	82.2	105.9	113.8	119.6	4.0	6.5	6.6	7.4	5.1
Oil	23.9	31.4	47.7	59.4	61.4	64.6	4.7	7.2	5.6	3.4	5.3
Natural gas	0.8	1.2	5.4	10.2	11.5	13.0	8.1	27.6	17.5	12.3	13.4
Other *(1)*	47.0	54.6	64.3	72.9	73.1	76.6	2.5	2.7	3.2	0.2	4.7
Electricity Generation in TWh	76.7	119.3	201.3	286.0	309.4	na	7.6	9.1	9.2	8.2	na
Nuclear	2.2	3.0	5.0	6.1	5.4	6.5	5.3	9.0	4.9	-10.9	20.1
Hydro	27.9	46.6	53.9	66.1	67.5	62.7	8.9	2.5	5.3	2.2	-7.2
Thermal	46.6	69.7	142.4	213.9	236.4	na	6.9	12.6	10.7	10.6	na
Generation Capacity in GWe	20.3	31.6	55.0	76.0	na	na	7.6	9.7	8.4	na	na
Nuclear	0.6	0.9	1.3	1.6	na	na	5.0	7.5	4.2	na	na
Hydro	7.5	10.9	16.2	18.9	na	na	6.3	6.9	3.9	na	na
Thermal	12.2	19.9	37.5	55.6	na	na	8.5	11.2	10.4	na	na
Average Load Factor in %	43.0	43.1	41.8	43.0	na	na	0.0	-0.5	0.7	na	na
Fuel Inputs for Thermal Power Generation	14.8	22.2	43.8	62.5	70.0	na	7.0	12.0	9.3	12.0	na
Solids	12.6	19.0	39.4	56.7	63.4	na	7.0	12.9	9.5	11.9	na
Oil	1.9	2.8	2.7	2.9	2.8	na	7.0	-0.8	2.0	-5.3	na
Gas	0.3	0.4	1.7	3.0	3.9	na	5.7	26.8	15.5	31.4	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	27.0	27.0	28.0	29.4	29.0	na	-0.1	0.6	1.3	-1.3	na
Non-Energy Uses	1.9	2.4	2.7	2.4	2.6	na	3.8	2.4	-3.1	8.0	na
Total Final Energy Demand	96.7	114.3	152.0	184.1	186.9	na	2.8	4.9	4.9	1.5	na
Solids	29.1	30.6	39.8	45.5	46.7	na	0.9	4.5	3.4	2.7	na
Oil	18.3	25.5	38.1	49.2	50.0	na	5.7	6.9	6.6	1.8	na
Gas	0.4	0.7	3.1	6.0	6.1	na	8.7	27.9	18.5	2.0	na
Electricity	5.0	7.7	12.7	17.8	18.2	na	7.5	8.8	8.8	2.3	na
Heat	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Biomass	44.0	49.8	58.3	65.6	65.8	na	2.1	2.7	3.0	0.3	na
CO2 Emissions in Mt of CO2											
Total	233	294	458	594	630	na	3.9	7.7	6.7	6.1	na
Excluding Bunkers and Air Transport	231	290	453	588	625	na	3.9	7.7	6.8	6.2	na
Indicators											
Population (Million)	588	675	766	827	850	866	2.3	2.1	1.9	2.7	1.9
GDP (Index 1985 = 100)	48.6	79.9	104.6	129.0	133.7	138.1	8.6	4.6	5.4	3.6	3.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	707	670	684	662	658	668	-0.9	0.3	-0.8	-0.7	1.5
Gross Inl. Consumption/Capita (toe/inhabitant)	0.20	0.21	0.26	0.30	0.31	0.32	1.2	3.4	3.6	1.8	3.4
Electricity Generated/Capita (kWh/inhabitant)	130	177	263	346	364	na	5.2	6.8	7.1	5.3	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.40	0.44	0.60	0.72	0.74	na	1.6	5.4	4.7	3.2	na
Import Dependency (%)	14.4	16.8	8.4	12.2	13.1	na	2.6	-10.9	9.8	7.5	na

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass

NICS: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	14.9	18.0	30.2	34.0	33.6	33.3	3.1	9.1	3.0	-1.1	-0.9
Solids	9.3	10.2	12.2	8.2	7.2	7.0	1.4	3.1	-9.5	-12.6	-2.5
Oil	0.2	0.2	0.1	0.2	0.1	0.1	0.1	-11.2	14.6	-39.4	1.6
Natural gas	1.3	1.6	1.0	1.2	0.9	0.9	3.6	-7.7	4.6	-24.4	1.5
Nuclear	0.0	3.0	14.4	22.3	23.9	23.6	0.0	29.6	11.6	6.8	-1.3
Hydro	0.6	0.4	1.0	1.3	0.9	1.1	-4.8	15.1	6.2	-27.4	22.2
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	3.6	2.6	1.5	0.8	0.7	0.6	-5.4	-8.3	-13.7	-21.0	-5.0
Net Imports	41.8	70.4	94.9	144.9	158.3	na	9.0	5.1	11.2	9.3	na
Solids	1.0	8.1	24.2	33.2	36.9	na	42.4	19.9	8.2	11.1	na
Oil	40.9	62.2	70.6	108.2	116.3	na	7.3	2.1	11.3	7.6	na
Crude oil	*49.3*	*74.5*	*81.1*	*107.6*	*122.2*	*na*	*7.1*	*1.4*	*7.3*	*13.6*	*na*
Oil products	*-8.4*	*-12.3*	*-10.5*	*0.5*	*-5.9*	*na*	*6.5*	*-2.6*	-	-	*na*
Natural gas	0	0	0.1	3.7	5.4	na	-	-	122.9	45.8	na
Electricity	0.0	0.0	-0.1	-0.2	-0.3	na	0.0	19.9	10.5	69.7	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Gross Inland Consumption	47.4	83.1	113.0	159.5	175.0	191.7	9.8	5.3	9.0	9.7	9.5
Solids	10.1	17.3	36.0	41.0	43.0	44.4	9.4	13.1	3.3	4.8	3.4
Oil	31.9	58.3	59.2	89.3	100.8	114.3	10.6	0.3	10.8	12.8	13.4
Natural gas	1.3	1.6	1.0	4.8	6.0	7.4	3.6	-6.8	46.9	24.6	22.2
Other *(1)*	4.1	6.0	16.8	24.3	25.2	25.6	6.4	18.7	9.6	3.7	1.5
Electricity Generation in TWh	48.9	99.5	158.3	237.8	259.9	na	12.6	8.1	10.7	9.3	na
Nuclear	0.0	11.7	55.3	85.8	91.6	na	0.0	29.6	11.6	6.8	na
Hydro	6.6	4.9	11.4	14.5	10.6	na	-4.8	15.1	6.2	-27.4	na
Thermal	42.3	82.9	91.6	137.5	157.7	na	11.9	1.7	10.7	14.7	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	9.9	18.7	20.8	30.1	34.7	na	11.1	1.8	9.6	15.3	na
Solids	0.4	2.3	13.1	15.1	16.3	na	32.6	33.8	3.7	7.5	na
Oil	9.3	16.4	7.7	12.5	15.5	na	10.0	-11.9	12.9	23.9	na
Gas	0.2	0.0	0.1	2.5	2.9	na	-100.0	0.0	163.3	18.9	na
Geothermal	0	0	0	0	0	na	-	-	-	-	na
Biomass	0	0	0	0	0	na	-	-	-	-	na
Average Thermal Efficiency in %	36.6	38.1	37.8	39.3	39.1	na	0.7	-0.1	0.9	-0.5	na
Non-Energy Uses	1.1	1.1	1.8	2.6	3.5	na	-1.4	9.1	9.8	34.2	na
Total Final Energy Demand	35.8	60.8	80.0	113.3	122.7	na	9.3	4.7	9.1	8.4	na
Solids	9.5	14.2	21.2	23.5	23.6	na	7.1	6.8	2.6	0.3	na
Oil	18.1	35.2	44.6	69.1	76.2	na	11.7	4.0	11.6	10.2	na
Gas	1.0	1.5	1.2	2.4	3.1	na	6.7	-3.9	19.2	29.2	na
Electricity	3.6	7.3	11.5	17.4	19.2	na	12.6	7.8	10.9	10.4	na
Heat	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Biomass	3.6	2.6	1.5	0.9	0.7	na	-5.3	-8.2	-13.8	-20.8	na
CO2 Emissions in Mt of CO2											
Total	126	228	299	415	453	na	10.3	4.6	8.5	9.3	na
Excluding Bunkers and Air Transport	122	220	287	398	438	na	10.4	4.6	8.5	9.9	na
Indicators											
Population (Million)	60.5	65.1	68.4	71.7	72.5	73.1	1.2	0.8	1.2	1.0	0.9
GDP (Index 1985 = 100)	23.6	36.5	111.2	154.2	166.3	177.7	7.5	20.4	8.5	7.8	6.8
Gross Inl. Consumption/GDP (toe/1985 MECU)	742	844	376	383	389	399	2.2	-12.6	0.4	1.8	2.5
Gross Inl. Consumption/Capita (toe/inhabitant)	0.78	1.28	1.65	2.22	2.41	2.62	8.5	4.4	7.7	8.6	8.6
Electricity Generated/Capita (kWh/inhabitant)	808	1528	2315	3314	3586	na	11.2	7.2	9.4	8.2	na
CO2 Emissions/Capita (t of CO2/inhabitant)	2.34	3.76	4.81	6.37	6.95	na	8.3	4.2	7.3	9.0	na
Import Dependency (%)	80.1	79.3	77.2	83.7	82.8	na	-0.2	-0.4	2.0	-1.1	na

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

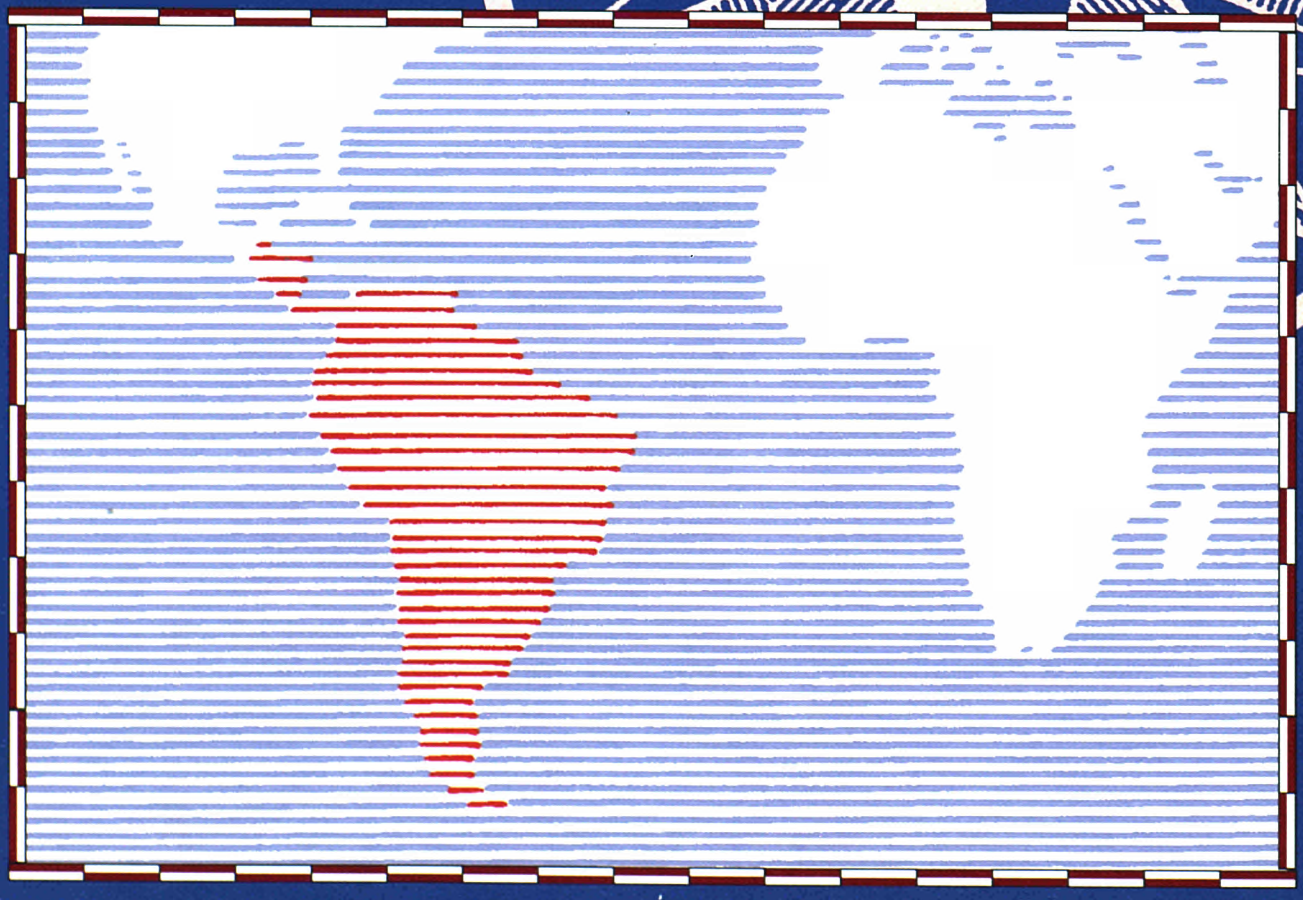
OTHER ASIA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	186.3	251.4	309.5	358.4	380.4	434.2	5.1	3.5	3.7	6.1	14.1
Solids	26.3	32.2	39.7	46.8	50.6	53.4	3.5	3.6	4.2	8.1	5.4
Oil	84.5	109.2	111.9	124.8	134.9	140.1	4.4	0.4	2.8	8.1	3.9
Natural gas	10.1	29.2	61.4	81.0	87.3	95.6	19.4	13.2	7.2	7.8	9.5
Nuclear	0.1	0.0	0.1	0.1	0.1	0.1	-	0.0	-9.2	31.6	0.0
Hydro	2.6	4.1	6.7	7.7	7.9	8.3	7.9	8.2	3.6	3.1	5.0
Geothermal	0.0	1.8	4.1	5.7	5.9	6.1	0.0	15.1	8.2	3.9	4.0
Biomass	62.7	74.9	85.5	92.4	93.7	130.6	3.0	2.2	2.0	1.5	39.4
Net Imports	-38.8	-54.0	-64.0	-53.6	-65.8	na	5.6	-	-	22.6	na
Solids	0.1	0.9	3.4	2.7	0.0	na	52.3	24.9	-6.0	-	na
Oil	-33.6	-36.7	-33.4	-15.2	-23.4	na	1.5	-1.6	-17.8	53.5	na
Crude oil	*-44.6*	*-54.7*	*-43.8*	*-34.1*	*-42.2*	*na*	*3.5*	-	*-6.1*	*23.7*	*na*
Oil products	*10.9*	*17.9*	*10.4*	*18.9*	*18.8*	*na*	*8.6*	*-8.8*	-	-	*na*
Natural gas	-5.2	-18.1	-33.9	-41.0	-42.2	na	23.0	11.0	4.9	3.1	na
Electricity	0.0	0.0	0.0	-0.1	-0.1	na	61.9	-6.5	-	16.5	na
Biomass	-0.1	-0.1	-0.1	0.0	0.0	na	10.7	2.5	-63.0	50.0	na
Gross Inland Consumption	145.7	193.6	247.5	300.1	311.2	332.9	4.8	4.2	4.9	3.7	7.0
Solids	26.3	33.1	42.7	49.5	50.5	52.4	3.9	4.3	3.8	2.0	3.8
Oil	49.1	68.6	81.1	104.9	108.2	118.2	5.7	2.8	6.6	3.1	9.3
Natural gas	4.9	11.1	27.4	40.0	45.1	48.0	14.6	16.3	9.9	12.6	6.5
Other *(1)*	65.4	80.8	96.3	105.7	107.5	114.3	3.6	3.0	2.4	1.7	6.3
Electricity Generation in TWh	75.3	123.9	192.3	270.4	288.3	na	8.7	7.6	8.9	6.6	na
Nuclear	0.5	0.0	0.4	0.3	0.4	0.4	-59.6	144.8	-9.1	31.4	0.0
Hydro	30.5	48.2	77.3	89.1	91.8	96.4	7.9	8.2	3.6	3.1	5.0
Thermal	44.3	75.7	114.5	181.0	196.1	na	9.4	7.1	12.1	8.3	na
Generation Capacity in GWe	na	na	na	na	na	na	na	na	na	na	na
Nuclear	na	na	na	na	na	na	na	na	na	na	na
Hydro	na	na	na	na	na	na	na	na	na	na	na
Thermal	na	na	na	na	na	na	na	na	na	na	na
Average Load Factor in %	na	na	na	na	na	na	na	na	na	na	na
Fuel Inputs for Thermal Power Generation	12.5	22.6	34.0	50.9	55.2	na	10.4	7.0	10.6	8.5	na
Solids	3.7	5.8	12.2	16.5	17.4	na	7.8	13.1	7.7	5.5	na
Oil	7.3	12.4	10.6	16.7	17.2	na	9.4	-2.7	12.1	3.1	na
Gas	1.4	2.3	6.6	11.5	14.1	na	8.7	19.2	14.7	23.3	na
Geothermal	0.0	1.8	4.1	5.7	5.9	na	0.0	15.1	8.2	3.9	na
Biomass	0.1	0.3	0.4	0.5	0.5	na	11.1	8.3	7.5	1.1	na
Average Thermal Efficiency in %	30.4	28.8	29.0	30.6	30.5	na	-0.9	0.1	1.4	-0.2	na
Non-Energy Uses	0.9	1.3	1.6	2.4	2.7	na	6.5	2.7	11.0	13.2	na
Total Final Energy Demand	128.5	166.0	198.7	236.1	243.3	na	4.4	3.0	4.4	3.1	na
Solids	21.3	25.4	28.0	30.3	30.6	na	3.0	1.6	2.0	1.0	na
Oil	36.3	51.1	59.4	79.4	83.2	na	5.9	2.5	7.5	4.8	na
Gas	3.0	6.2	13.3	16.2	16.6	na	12.6	13.6	5.1	2.8	na
Electricity	5.3	8.7	13.1	18.4	19.7	na	8.5	7.1	8.8	7.1	na
Heat	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	na
Biomass	62.5	74.6	84.9	91.8	93.2	na	3.0	2.2	2.0	1.5	na
CO2 Emissions in Mt of CO2											
Total	249	346	430	557	583	na	5.6	3.7	6.7	4.5	na
Excluding Bunkers and Air Transport	239	335	418	539	564	na	5.8	3.7	6.6	4.6	na
Indicators											
Population (Million)	418	478	688	747	770	788	2.2	6.3	2.1	3.1	2.3
GDP (Index 1985 = 100)	54.5	80.0	104.5	135.2	141.0	147.7	6.6	4.6	6.7	4.3	4.8
Gross Inl. Consumption/GDP (toe/1985 MECU)	811	735	719	673	670	684	-1.6	-0.4	-1.6	-0.5	2.1
Gross Inl. Consumption/Capita (toe/inhabitant)	0.35	0.41	0.36	0.40	0.40	0.42	2.5	-2.0	2.8	0.6	4.5
Electricity Generated/Capita (kWh/inhabitant)	180	259	280	362	374	na	6.3	1.3	6.7	3.4	na
CO2 Emissions/Capita (t of CO2/inhabitant)	0.60	0.72	0.63	0.75	0.76	na	3.3	-2.4	4.5	1.4	na
Import Dependency (%)	-26.4	-27.7	-25.7	-17.8	-21.0	na	0.8	-	-	18.2	na

(1) Includes nuclear, hydro and wind, net imports of electricity and biomass.

PART XI

LATIN AMERICA



LATIN AMERICA[3]

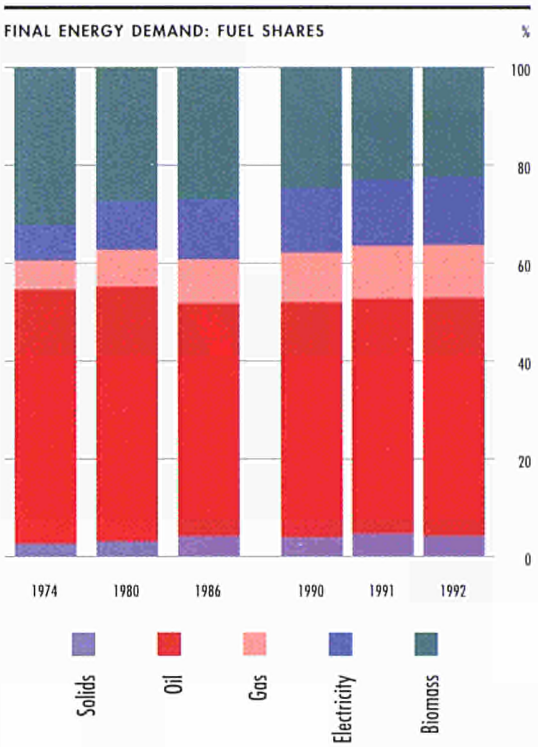
[3] *Excluding Mexico*

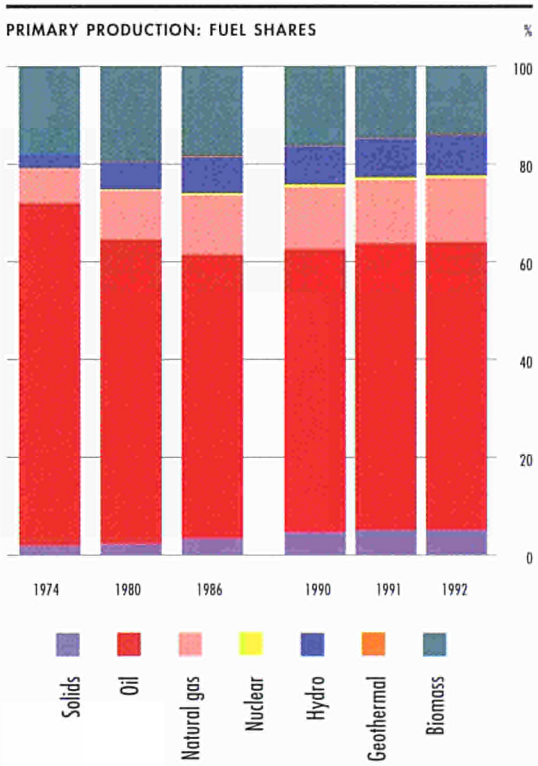
Latin America includes all countries of Central and South America, and the Caribbean islands. This region, is characterised by a mix of some large countries, such as Brazil (mainly a consumer) and Venezuela (mainly an oil producer) and a multitude of smaller countries with different economic structures (thus different consumption patterns) and energy resource endowments. In general, the stage of economic development is intermediate between the OECD members and the less developed countries of Africa and Asia. In 1992, the average GDP per capita in Latin America was 2.2 thousand 1985 ECU per inhabitant, or five times less than the European average, but more than the triple the Asian average and 29% higher than in North Africa.

Final energy consumption has increased steadily by about 2% per year to 1992. This growth was satisfied by oil (42% of the overall increment), electricity (27%), gas (20%), solids (8%,) and biomass (3% of the overall increment). In 1992, the shares of each fuel were: 49% for oil (52% in 1974); 22% for biomass (32% in 1974); 14% for electricity (7% in 1974); 11% for gas (6% in 1974); and 4% for solid fuels (3% in 1974). Brazil accounted, in 1992, for 44% of total final demand in Latin America (61% for solids, 56% for biomass, 51% for electricity, 43% for oil and 9% for gas). Therefore, developments in final energy demand in Latin America were dominated by the evolution of demand in Brazil. Only in the case of natural gas were developments not determined by Brazilian demand.

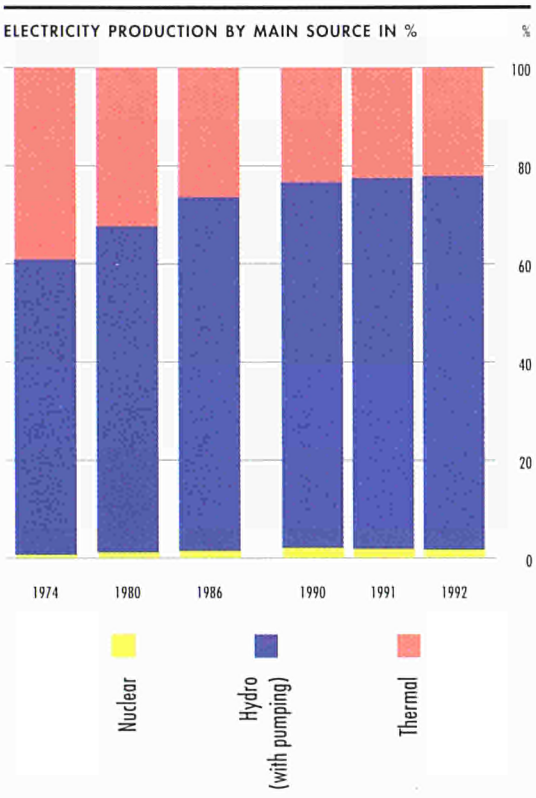
Gross inland energy consumption in Latin America, which grew in line with final demand, is dominated by oil (48% of total in 1992). Oil has grown slower (1% per year) than total consumption. After oil, renewable energy sources come second satisfying 28% of total demand. These sources grew on average in the period by 2% per year, but this increase is mainly due to the development of hydro power (almost 8% per year). Natural gas grew by 5% per year in the period and represented 17% of total in 1992. Solid fuels, which accounted for 6% of total in 1992, increased in the period by 5% per year. There is also some participation of nuclear energy but representing less than 1% of total in 1992.

Indigenous **energy production** in this region grew on average in the period by less than 2% per year, or some half a percent slower than total primary energy demand. Production is made up of oil (59% of total in 1992), renewable sources



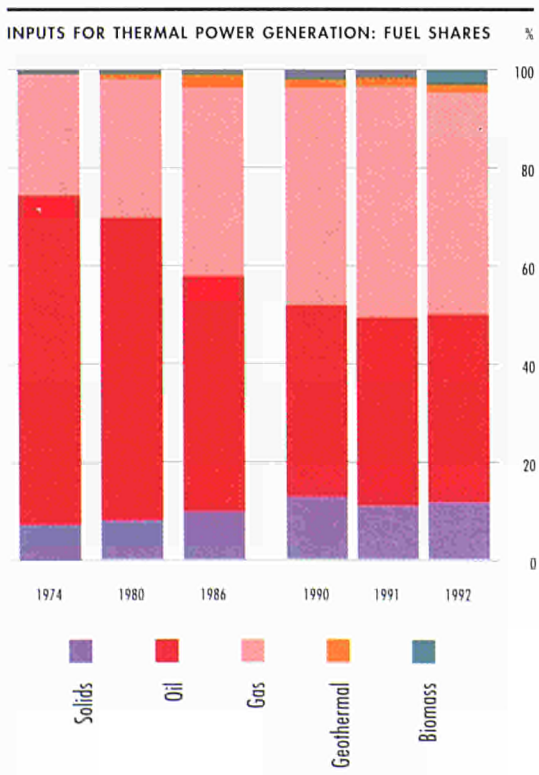


(22%), natural gas (13%), solids (5%) and nuclear (less than 1%). In 1992, while Venezuela dominated oil (51%) and natural gas production (42%), Brazil was mainly responsible for hydro power and biomass (55% and 52% respectively).



This region has been a **net exporter of energy**, but with volumes fluctuating. The lowest net export volume was attained in 1980 (8% of indigenous production) and the maximum in 1991 (19% of production). This picture is dominated by oil which accounted for 97% of total exports in 1992 (almost equally shared between crude and finished products). However, the region imported crude oil in the 1970s. Brazil is a net importer with crude oil accounting for 72% of its total imports. Venezuela is a net exporter, practically entirely of oil. The evolution of the net exports of crude from Venezuela, one of the founders of OPEC, has a profile close to that of the Middle East.

Electricity generation in the region has grown steadily by 6% per year in the period. Hydro electricity production dominates total generation with 76% in 1992 (61% in 1974). In 1992, nuclear accounted for almost 2% of total generation. While in Brazil, hydro power covered 93% of electricity generation in 1992, in Venezuela electricity production was shared almost equally between hydro and thermal units. Brazil and Argentina have some nuclear energy.

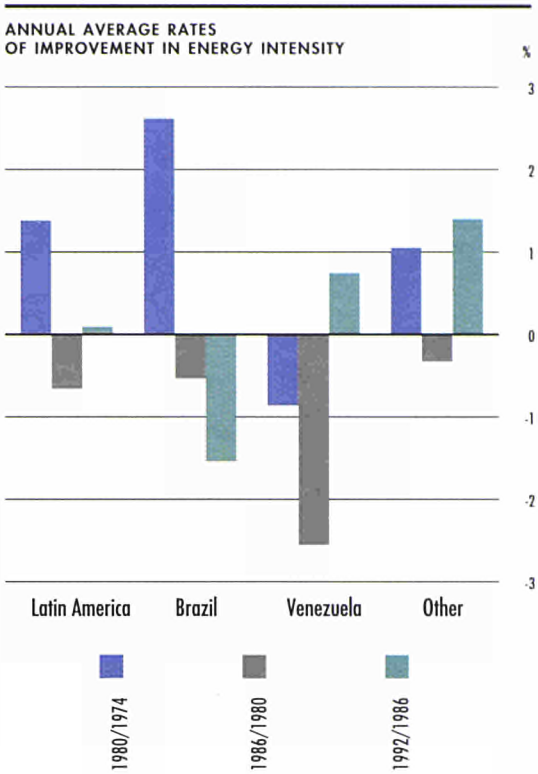


Inputs for thermal generation, which satisfied 22% of total generation in 1992, grew almost 5% to 1980 and since then they have slowed down less than 2% per year. In general, gas has significantly penetrated this market, both meeting increasing needs and replacing some oil. Solids use has also increased by almost 6% per year, but they only accounted for 11% of total inputs in 1992 against 45% for gas and 39% for oil. The remaining 5% was covered by geothermal and biomass. The picture is different at country level. In the case of Brazil, inputs for thermal generation in 1992 were shared almost equally by solids, oil and biomass. In Venezuela, gas dominates the fuel inputs with 88% in 1992. Oil is also used. There is no use of solids or biomass.

The **energy intensity** indicator for the region has had different developments in the period. From a peak in 1974, it dropped to 1980 (1.4% per year) attaining the lowest level. It increased by 0.6% per year until 1990; and decreased since then by 1.9% in 1991 and 1.5% in 1992. The evolution by country is also different. While in Brazil it dropped in the 1970s and since 1980 has continuously increased, in Venezuela the ratio increased steadily until 1990 and since then has been decreasing. Compared to the European Union, the energy intensity of Brazil and Venezuela was, in 1992, 44% and 48% higher respectively.

Except for Venezuela, the ratio of gross inland consumption to population is rather low compared to Europe (74% below) and has been rather stable throughout the period. In Venezuela, this ratio fluctuates, but was only 34% below the European average in 1992.

Below are the summary tables for the region as a whole, Brazil, Venezuela and Other.



LATIN AMERICA: MAIN INDICATORS

	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91	92/74
							Annual % Change					
Gross Inl. Consumption/GDP (toe/1985 MECU)												
LATIN AMERICA	422	389	404	416	408	402	-1.4	0.7	0.7	-1.9	-1.5	-0.3
Brazil	440	376	388	397	405	425	-2.6	0.5	0.6	2.0	5.0	-0.2
Venezuela	374	394	458	471	448	438	0.9	2.6	0.7	-4.9	-2.2	0.9
Other	424	398	406	419	401	373	-1.1	0.3	0.8	-4.4	-6.9	-0.7
European Union	381	352	323	301	302	297	-1.3	-1.4	-1.8	0.3	-1.6	-1.4
Gross Inland Consumption per Capita (toe/inhabitant)												
LATIN AMERICA	0.91	0.95	0.93	0.92	0.91	0.90	0.8	-0.5	-0.2	-0.9	-1.2	-0.1
Brazil	0.79	0.88	0.90	0.87	0.88	0.89	1.7	0.4	-0.8	1.3	1.5	0.7
Venezuela	2.47	2.35	2.23	2.21	2.24	2.30	-0.8	-0.9	-0.2	1.2	2.6	-0.4
Other	0.86	0.88	0.81	0.83	0.80	0.76	0.3	-1.2	0.3	-3.4	-4.9	-0.7
European Union	3.23	3.36	3.36	3.49	3.51	3.48	0.7	0.0	0.9	0.8	-0.9	0.4
GDP/Capita (thousand 1985 ECU/inhabitant)												
LATIN AMERICA	2.15	2.45	2.29	2.21	2.23	2.24	2.2	-1.1	-0.9	1.0	0.3	0.2
Brazil	1.80	2.33	2.32	2.19	2.18	2.10	4.4	-0.1	-1.4	-0.7	-3.4	0.9
Venezuela	6.60	5.98	4.87	4.70	5.00	5.25	-1.6	-3.4	-0.9	6.4	4.9	-1.3
Other	2.03	2.21	2.01	1.97	1.99	2.03	1.4	-1.6	-0.5	1.1	2.2	0.0
European Union	8.46	9.56	10.40	11.58	11.64	11.72	2.0	1.4	2.7	0.6	0.7	1.8

LATIN AMERICA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	321.9	312.6	363.0	407.0	423.9	429.5	-0.5	2.5	2.9	4.1	1.3
Solids	5.3	6.2	11.7	18.4	20.8	21.1	2.8	11.2	12.0	12.9	1.7
Oil	225.9	195.2	210.9	236.5	249.7	252.9	-2.4	1.3	2.9	5.6	1.3
Natural gas	22.8	31.6	44.2	51.8	55.4	56.4	5.5	5.8	4.0	6.9	1.8
Nuclear	0.3	0.6	1.5	2.5	2.4	2.3	14.5	16.5	12.9	-3.2	-4.1
Hydro	9.4	17.4	26.8	31.9	33.8	35.5	10.9	7.4	4.4	6.1	4.8
Geothermal	0.0	0.3	0.9	0.6	0.6	0.6	46.6	17.7	-9.2	0.8	1.4
Biomass	58.2	61.3	67.0	65.4	61.2	60.7	0.9	1.5	-0.6	-6.4	-0.8
Net Imports	-76.8	-25.7	-46.7	-66.8	-82.2	-76.9	-16.7	10.4	9.4	23.1	-6.5
Solids	2.6	5.1	4.0	-0.5	-1.2	-1.7	11.9	-4.2	-	147.7	36.8
Oil	-79.7	-31.0	-50.6	-66.3	-80.5	-74.8	-14.5	8.5	7.0	21.6	-7.1
Crude oil	*21.4*	*30.2*	*-15.7*	*-26.1*	*-34.9*	*-35.5*	*5.9*	*-*	*13.6*	*34.0*	*1.6*
Oil products	*-101.1*	*-61.2*	*-35.0*	*-40.2*	*-45.6*	*-39.3*	*-8.0*	*-8.9*	*3.5*	*13.5*	*-13.8*
Natural gas	0.2	0.2	0.1	0.0	-0.2	0.0	-4.5	-9.8	-30.4	-	-
Electricity	0.0	0.0	-0.1	-0.1	-0.3	-0.4	-	50.1	-16.1	276.5	38.6
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	232.6	278.6	307.5	331.5	334.1	336.3	3.1	1.7	1.9	0.8	0.6
Solids	7.6	11.0	15.9	17.6	19.1	19.2	6.3	6.4	2.5	8.5	0.4
Oil	134.0	156.3	151.2	161.8	162.0	164.3	2.6	-0.5	1.7	0.1	1.4
Natural gas	23.1	31.7	44.3	51.8	55.2	56.5	5.5	5.7	4.0	6.6	2.4
Other *(1)*	67.9	79.7	96.1	100.3	97.8	96.3	2.7	3.2	1.1	-2.5	-1.6
Electricity Generation in TWh	179.9	304.1	431.2	496.8	520.3	539.8	9.1	6.0	3.6	4.7	3.8
Nuclear	1.0	2.3	5.9	9.5	9.2	8.8	14.5	16.5	12.9	-3.2	-4.1
Hydro	109.1	202.8	311.5	370.6	393.2	412.3	10.9	7.4	4.4	6.1	4.8
Thermal	69.7	98.9	113.9	116.7	117.8	118.7	6.0	2.4	0.6	1.0	0.8
Generation Capacity in GWe	58.7	92.5	136.5	158.3	164.8	166.1	7.9	6.7	3.8	4.1	0.8
Nuclear	0.3	0.4	1.7	2.4	2.4	2.4	1.4	28.6	8.8	0.0	0.0
Hydro	27.5	48.8	76.0	93.0	96.7	98.2	10.0	7.7	5.2	4.0	1.6
Thermal	30.8	43.4	58.8	63.0	65.8	65.5	5.9	5.2	1.8	4.3	-0.4
Average Load Factor in %	35.0	37.5	36.1	35.8	36.0	37.1	1.2	-0.7	-0.2	0.6	3.0
Fuel Inputs for Thermal Power Generation	22.4	29.6	33.0	33.3	33.5	35.8	4.7	1.8	0.2	0.7	6.8
Solids	1.5	2.3	3.2	4.2	3.6	4.1	7.8	5.3	7.4	-13.7	14.3
Oil	15.1	18.3	15.8	13.1	12.9	13.7	3.2	-2.4	-4.6	-1.4	6.5
Gas	5.6	8.4	12.6	14.8	15.8	16.2	7.0	7.2	4.0	6.5	2.6
Geothermal	0.0	0.3	0.9	0.6	0.6	0.6	46.6	17.7	-9.2	0.8	0.8
Biomass	0.2	0.3	0.5	0.6	0.6	1.1	4.4	9.0	4.1	2.5	87.3
Average Thermal Efficiency in %	26.7	28.8	29.7	30.2	30.3	28.6	1.2	0.5	0.4	0.3	-5.7
Non-Energy Uses	4.3	7.0	7.2	5.8	6.3	6.5	8.3	0.4	-5.0	8.9	2.3
Total Final Energy Demand	179.5	223.3	245.6	262.4	266.2	270.6	3.7	1.6	1.7	1.4	1.7
Solids	4.6	7.0	10.6	10.7	13.0	11.9	7.2	7.0	0.3	21.0	-8.4
Oil	93.2	116.5	116.4	125.7	127.9	131.3	3.8	0.0	1.9	1.8	2.6
Gas	10.8	17.0	22.1	26.8	28.9	29.4	7.8	4.5	5.0	7.7	2.0
Electricity	12.8	21.7	30.0	34.4	35.8	37.3	9.2	5.5	3.5	4.0	4.3
Heat	0	0	0	0	0	0	-	-	-	-	-
Biomass	58.0	61.0	66.5	64.8	60.6	60.7	0.8	1.5	-0.7	-6.4	0.1
CO2 Emissions in Mt of CO2											
Total	412	527	569	613	634	647	4.2	1.3	1.9	3.4	2.2
Excluding Bunkers and Air Transport	400	509	551	595	616	630	4.1	1.3	1.9	3.5	2.2
Indicators											
Population (Million)	255.6	292.2	332.0	360.3	366.4	373.3	2.3	2.2	2.1	1.7	1.9
GDP (Index 1985 = 100)	76.8	100.0	106.1	111.2	114.2	116.7	4.5	1.0	1.2	2.7	2.2
Gross Inl. Consumption/GDP (toe/1985 MECU)	422	389	404	416	408	402	-1.4	0.7	0.7	-1.9	-1.5
Gross Inl. Consumption/Capita (toe/inhabitant)	0.91	0.95	0.93	0.92	0.91	0.90	0.8	-0.5	-0.2	-0.9	-1.2
Electricity Generated/Capita (kWh/inhabitant)	704	1041	1299	1379	1420	1446	6.7	3.8	1.5	3.0	1.9
CO2 Emissions/Capita (t of CO2/inhabitant)	1.61	1.80	1.71	1.70	1.73	1.73	1.9	-0.8	-0.2	1.7	0.3
Import Dependency (%)	-31.3	-9.0	-14.9	-19.8	-24.2	-22.5	-18.7	8.8	7.3	22.1	-7.0

(1) Includes nuclear, hydro and wind, bet imports of electricity and biomass.

BRAZIL: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	49.8	58.5	95.0	96.7	98.3	96.7	2.7	8.4	0.4	1.6	-1.6
Solids	1.5	2.5	3.3	2.0	2.3	2.0	8.1	4.7	-11.2	11.5	-10.8
Oil	9.4	10.7	36.4	39.2	39.6	39.8	2.1	22.7	1.9	0.9	0.7
Natural gas	0.3	0.9	2.4	3.0	3.0	3.1	17.7	17.9	5.5	-1.5	3.4
Nuclear	0.0	0.0	0.0	0.6	0.4	0.3	-	-	97.9	-35.5	-14.6
Hydro	5.8	11.3	16.1	18.2	19.2	19.7	11.7	6.0	3.2	5.4	2.6
Geothermal	0	0	0	0	0	0	-	-	-	-	-
Biomass	32.7	33.2	36.9	33.6	33.9	31.8	0.3	1.8	-2.3	0.8	-6.3
Net Imports	35.3	47.4	32.9	37.7	37.5	37.1	5.0	-5.9	3.4	-0.4	-1.0
Solids	1.4	3.7	6.2	7.8	8.6	8.3	17.1	9.2	6.0	10.1	-3.8
Oil	33.9	43.7	25.8	27.6	26.6	26.8	4.3	-8.4	1.7	-3.6	0.8
Crude oil	*35.0*	*43.4*	*30.2*	*29.4*	*26.6*	*26.8*	*3.6*	*-5.9*	*-0.7*	*-9.6*	*0.8*
Oil products	*-1.1*	*0.3*	*-4.4*	*-1.8*	*0.0*	*0.0*	-	-	*-19.5*	*-99.7*	*-10.7*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.0	0.0	0.9	2.3	2.3	2.1	-	-	26.7	2.1	-10.9
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	83.8	106.3	124.6	130.9	135.1	139.8	4.0	2.7	1.2	3.2	3.4
Solids	2.7	5.8	9.9	9.7	11.3	16.6	13.6	9.2	-0.5	16.6	46.8
Oil	42.3	55.1	58.5	63.5	65.1	66.8	4.5	1.0	2.1	2.5	2.7
Natural gas	0.3	0.9	2.4	3.0	3.0	3.2	17.7	17.9	5.5	-1.5	8.9
Other *(1)*	38.5	44.5	53.8	54.7	55.8	53.2	2.4	3.2	0.4	2.0	-4.7
Electricity Generation in TWh	73.6	141.8	206.4	228.1	240.0	247.6	11.5	6.5	2.5	5.2	3.1
Nuclear	0.0	0.0	0.1	2.2	1.4	1.2	-	-	98.5	-35.5	-14.6
Hydro	67.6	131.4	186.7	212.0	223.4	229.9	11.7	6.0	3.2	5.4	2.9
Thermal	6.0	10.5	19.6	13.9	15.1	16.5	9.7	11.0	-8.2	9.1	8.7
Generation Capacity in GWe	18.4	33.0	45.1	53.0	54.1	55.1	10.2	5.3	4.1	2.1	1.8
Nuclear	0.0	0.0	0.7	0.7	0.7	0.7	-	-	-	-	-
Hydro	13.9	27.2	37.9	45.6	46.7	47.7	11.8	5.7	4.7	2.4	2.2
Thermal	4.5	5.8	6.5	6.8	6.8	6.8	4.4	1.8	1.0	0.3	-0.3
Average Load Factor in %	45.6	49.1	52.3	49.1	50.6	51.3	1.2	1.1	-1.5	3.0	1.3
Fuel Inputs for Thermal Power Generation	1.8	2.3	4.4	2.9	3.3	3.3	4.4	11.4	-10.0	15.2	-1.2
Solids	0.5	0.8	1.4	1.2	1.4	1.1	6.7	10.5	-4.5	16.7	-21.8
Oil	1.1	1.3	2.6	1.1	1.3	1.1	3.2	12.1	-18.1	16.9	-21.2
Gas	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	9.1	48.2
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	0.2	0.2	0.4	0.5	0.5	1.0	4.0	9.7	5.1	7.5	106.0
Average Thermal Efficiency in %	29.2	39.4	38.6	41.7	39.5	43.5	5.1	-0.3	2.0	-5.2	10.1
Non-Energy Uses	2.0	3.4	3.6	3.0	2.8	2.9	9.4	1.1	-4.6	-4.4	0.4
Total Final Energy Demand	75.3	95.8	110.4	114.3	118.5	119.6	4.1	2.4	0.9	3.7	0.9
Solids	1.6	4.3	7.4	6.8	8.2	7.3	17.4	9.7	-2.3	21.6	-11.1
Oil	35.6	47.4	49.2	54.0	55.8	56.8	4.9	0.6	2.3	3.3	1.9
Gas	0.4	1.0	1.8	2.3	2.4	2.6	17.0	10.8	6.3	5.0	7.4
Electricity	5.2	10.2	15.5	18.1	18.7	19.2	11.7	7.3	3.9	3.2	2.3
Heat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	32.5	33.0	36.5	33.2	33.4	33.8	0.2	1.7	-2.3	0.7	1.1
CO2 Emissions in Mt of CO2											
Total	123	173	203	211	224	223	5.9	2.7	1.0	6.2	-0.6
Excluding Bunkers and Air Transport	119	168	196	205	218	216	5.9	2.6	1.2	6.2	-0.6
Indicators											
Population (Million)	105.5	121.3	138.5	150.4	153.3	156.3	2.3	2.2	2.1	2.0	1.9
GDP (Index 1985 = 100)	63.7	94.7	107.6	110.4	111.7	110.1	6.8	2.1	0.7	1.2	-1.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	440	376	388	397	405	425	-2.6	0.5	0.6	2.0	5.0
Gross Inl. Consumption/Capita (toe/inhabitant)	0.79	0.88	0.90	0.87	0.88	0.89	1.7	0.4	-0.8	1.3	1.5
Electricity Generated/Capita (kWh/inhabitant)	698	1170	1491	1517	1565	1584	9.0	4.1	0.4	3.2	1.2
CO2 Emissions/Capita (t of CO2/inhabitant)	1.13	1.38	1.41	1.36	1.42	1.38	3.5	0.4	-0.9	4.2	-2.5
Import Dependency (%)	42.1	44.3	26.2	28.7	27.6	26.5	0.8	-8.4	2.2	-3.5	-4.3

(1) Includes nuclear, hydro and wind, bet imports of electricity and biomass.

VENEZUELA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	172.5	133.3	118.9	140.9	157.7	159.0	-4.2	-1.9	4.3	12.0	0.8
Solids	0.0	0.0	0.0	1.3	1.6	1.9	-4.9	4.8	139.4	15.2	21.9
Oil	159.1	116.8	97.4	114.9	129.4	129.6	-5.0	-3.0	4.2	12.6	0.1
Natural gas	12.3	14.8	18.7	21.0	23.4	24.1	3.2	4.0	3.0	11.3	2.9
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	0.7	1.3	2.2	3.2	3.0	3.0	11.2	9.5	10.1	-7.2	2.9
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	0.5	0.4	0.5	0.4	0.4	0.4	-4.2	6.5	-8.1	-0.8	-0.5
Net Imports	-142.7	-98.1	-78.2	-97.4	-112.1	-107.0	-6.1	-3.7	5.6	15.1	-4.5
Solids	0.2	0.1	0.1	-0.9	-1.1	-1.4	-4.1	-2.2	-	18.6	23.7
Oil	-142.8	-98.2	-78.3	-96.4	-110.9	-105.6	-6.1	-3.7	5.3	15.0	-4.8
Crude oil	*-93.0*	*-69.6*	*-50.9*	*-65.1*	*-72.9*	*-72.5*	*-4.7*	*-5.1*	*6.4*	*12.0*	*-0.5*
Oil products	*-49.8*	*-28.6*	*-27.5*	*-31.4*	*-38.1*	*-33.1*	*-8.8*	*-0.7*	*3.4*	*21.2*	*-13.0*
Natural gas	0	0	0	0	0	0	-	-	-	-	-
Electricity	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	30.1	35.4	39.6	43.7	45.3	47.6	2.7	1.9	2.4	3.7	5.1
Solids	0.2	0.2	0.2	0.4	0.4	0.4	-4.3	-0.6	28.1	7.1	-17.3
Oil	16.5	18.8	18.1	18.7	18.1	19.2	2.2	-0.6	0.8	-2.9	5.9
Natural gas	12.3	14.8	18.7	21.0	23.4	24.5	3.2	4.0	3.0	11.3	4.8
Other *(1)*	1.1	1.6	2.7	3.5	3.3	3.5	6.2	8.9	7.3	-7.0	6.2
Electricity Generation in TWh	18.2	36.9	51.1	59.3	60.2	69.5	12.4	5.6	3.8	1.5	15.3
Nuclear	0	0	0	0	0	0	-	-	-	-	-
Hydro	7.7	14.6	25.2	37.0	34.3	35.3	11.2	9.5	10.1	-7.3	2.9
Thermal	10.5	22.3	25.9	22.3	25.9	34.2	13.3	2.6	-3.7	16.1	31.7
Generation Capacity in GWe	5.0	8.5	18.2	18.5	18.9	18.7	9.1	13.6	0.4	2.2	-1.0
Nuclear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydro	1.6	2.7	8.5	10.0	10.4	10.7	9.5	21.0	4.0	4.3	2.4
Thermal	3.4	5.7	9.6	8.5	8.5	8.1	9.0	9.0	-3.1	-0.1	-5.2
Average Load Factor in %	41.5	49.7	32.1	36.6	36.3	42.3	3.0	-7.0	3.3	-0.7	16.5
Fuel Inputs for Thermal Power Generation	4.5	7.6	9.2	8.0	7.8	8.0	9.2	3.2	-3.2	-2.6	2.5
Solids	0	0	0	0	0	0	-	-	-	-	-
Oil	1.3	3.7	2.8	1.8	1.0	1.0	18.4	-4.8	-10.0	-46.7	3.3
Gas	3.1	3.9	6.4	6.2	6.9	7.0	3.7	8.8	-0.7	10.1	2.3
Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Thermal Efficiency in %	20.3	25.3	24.4	23.9	28.5	36.6	3.7	-0.6	-0.5	19.3	28.5
Non-Energy Uses	0.3	1.2	1.5	1.3	1.8	1.8	22.3	4.3	-4.2	38.0	3.0
Total Final Energy Demand	14.3	22.9	24.7	27.6	29.7	30.9	8.1	1.3	2.8	7.5	4.0
Solids	0.2	0.2	0.2	0.4	0.4	0.5	-4.3	-0.5	27.4	7.2	11.9
Oil	7.3	11.4	12.5	12.7	13.3	13.6	7.7	1.5	0.4	4.7	1.9
Gas	5.1	8.4	8.1	10.3	11.5	11.7	8.7	-0.5	6.1	12.2	1.6
Electricity	1.3	2.6	3.4	3.9	4.1	4.8	12.9	4.5	3.0	4.9	17.4
Heat	0	0	0	0	0	0	-	-	-	-	-
Biomass	0.5	0.4	0.5	0.4	0.4	0.4	-4.2	6.5	-8.1	-0.8	-0.5
CO2 Emissions in Mt of CO2											
Total	56	80	91	96	101	103	6.3	2.1	1.2	5.3	2.1
Excluding Bunkers and Air Transport	54	78	90	95	100	102	6.3	2.2	1.4	5.3	2.1
Indicators											
Population (Million)	12.2	15.0	17.8	19.7	20.2	20.7	3.5	2.9	2.6	2.5	2.4
GDP (Index 1985 = 100)	99.1	110.7	106.6	114.2	124.6	133.9	1.9	-0.6	1.7	9.1	7.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	374	394	458	471	448	438	0.9	2.6	0.7	-4.9	-2.2
Gross Inl. Consumption/Capita (toe/inhabitant)	2.47	2.35	2.23	2.21	2.24	2.30	-0.8	-0.9	-0.2	1.2	2.6
Electricity Generated/Capita (kWh/inhabitant)	1496	2453	2872	3006	2978	3352	8.6	2.7	1.1	-0.9	12.6
CO2 Emissions/Capita (t of CO2/inhabitant)	4.56	5.35	5.12	4.84	4.98	4.96	2.7	-0.7	-1.4	2.8	-0.4
Import Dependency (%)	-438.9	-272.7	-195.1	-219.1	-242.6	-220.2	-7.6	-5.4	2.9	10.7	-9.2

(1) Includes nuclear, hydro and wind, bet imports of electricity and biomass

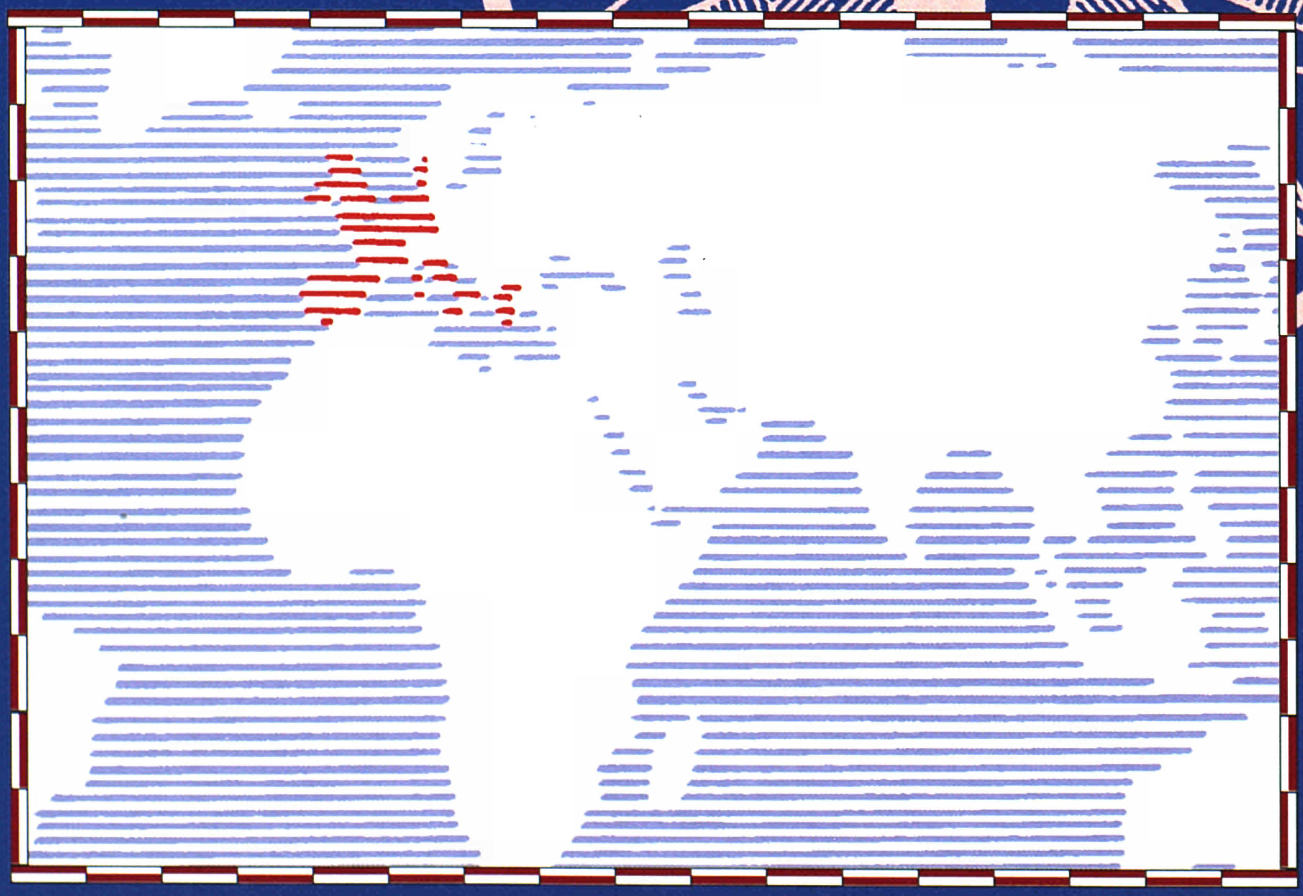
OTHER LATIN AMERICA: SUMMARY ENERGY BALANCE

Mtoe	1974	1980	1986	1990	1991	1992	80/74	86/80	90/86	91/90	92/91
							Annual % Change				
Primary Production	99.6	120.8	149.2	169.4	167.9	173.9	3.3	3.6	3.2	-0.9	3.6
Solids	3.7	3.7	8.4	15.0	17.0	17.2	0.1	14.6	15.6	12.9	1.5
Oil	57.4	67.7	77.1	82.3	80.7	83.5	2.8	2.2	1.7	-2.0	3.5
Natural gas	10.2	15.9	23.0	27.7	29.0	29.2	7.6	6.4	4.7	4.5	0.8
Nuclear	0.3	0.6	1.5	1.9	2.0	2.0	14.5	16.0	6.3	6.7	-2.1
hydro	2.9	4.9	8.6	10.5	11.7	12.7	9.1	9.8	5.1	11.4	9.1
Geothermal	0.0	0.3	0.9	0.6	0.6	0.6	46.6	17.7	-9.2	0.8	1.4
Biomass	25.1	27.7	29.6	31.3	26.9	28.6	1.7	1.1	1.4	-14.1	6.1
Net Imports	30.6	25.0	-1.3	-7.1	-7.6	-7.0	-3.3	-	51.7	8.0	-8.6
Solids	1.0	1.4	-2.3	-7.4	-8.7	-8.6	4.7	-	-	18.3	-1.5
Oil	29.3	23.4	1.9	2.6	3.8	4.0	-3.6	-34.2	8.2	45.8	5.0
Crude oil	*79.4*	*56.3*	*5.0*	*9.5*	*11.3*	*10.2*	*-5.6*	*-33.3*	*17.8*	*18.7*	*-10.0*
Oil products	*-50.1*	*-32.9*	*-3.1*	*-6.9*	*-7.5*	*-6.2*	*-6.8*	*-32.7*	*22.7*	*8.5*	*-17.6*
Natural gas	0.2	0.2	0.1	0.0	-0.2	0.0	-4.5	-9.8	-30.4	-	-
Electricity	0.0	0.0	-1.0	-2.4	-2.6	-2.4	-	-	23.1	9.3	-6.5
Biomass	0	0	0	0	0	0	-	-	-	-	-
Gross Inland Consumption	118.7	137.0	143.2	156.9	153.7	148.9	2.4	0.7	2.3	-2.1	-3.2
Solids	4.7	5.0	5.9	7.5	7.4	2.2	1.0	2.9	6.2	-1.9	-69.6
Oil	75.3	82.4	74.6	79.7	78.9	78.3	1.5	-1.6	1.7	-1.0	-0.8
Natural gas	10.5	16.0	23.1	27.8	28.8	28.8	7.4	6.3	4.7	3.8	-0.2
Other *(1)*	28.3	33.6	39.6	42.0	38.7	39.6	2.9	2.8	1.5	-7.9	2.4
Electricity Generation in TWh	88.0	125.4	173.7	209.4	220.0	222.8	6.1	5.6	4.8	5.1	1.3
Nuclear	1.0	2.3	5.7	7.3	7.8	7.6	14.5	16.0	6.3	6.7	-2.1
Hydro	33.8	56.9	99.6	121.7	135.5	147.1	9.1	9.8	5.1	11.4	8.6
Thermal	53.2	66.2	68.4	80.4	76.7	68.1	3.7	0.6	4.1	-4.6	-11.3
Generation Capacity in GWe	35.3	51.1	73.2	86.8	91.7	92.2	6.4	6.2	4.4	5.7	0.5
Nuclear	0.3	0.4	1.0	1.7	1.7	1.7	1.4	18.4	13.6	0.0	0.0
Hydro	12.0	18.9	29.6	37.4	39.6	39.8	7.8	7.7	6.0	5.9	0.6
Thermal	22.9	31.8	42.6	47.7	50.5	50.7	5.6	5.0	2.9	5.7	0.4
Average Load Factor in %	28.5	28.0	27.1	27.5	27.4	27.6	-0.3	-0.6	0.4	-0.6	0.8
Fuel Inputs for Thermal Power Generation	16.2	19.7	19.5	22.4	22.4	24.5	3.3	-0.2	3.5	0.0	9.5
Solids	0.9	1.5	1.7	3.0	2.2	3.1	8.5	1.9	15.0	-25.8	36.8
Oil	12.7	13.3	10.5	10.1	10.6	11.7	0.7	-3.9	-0.9	4.6	10.3
Gas	2.4	4.5	6.2	8.5	8.8	9.0	10.7	5.6	8.0	3.8	2.5
Geothermal	0.0	0.3	0.9	0.6	0.6	0.6	46.6	17.7	-9.2	0.8	0.8
Biomass	0.1	0.1	0.1	0.1	0.1	0.1	5.7	6.8	0.5	-17.9	-11.5
Average Thermal Efficiency in %	28.2	28.8	30.2	30.9	29.5	23.9	0.4	0.8	0.6	-4.6	-19.0
Non-Energy Uses	2.0	2.5	2.1	1.6	1.7	1.8	3.3	-2.9	-6.5	10.6	4.8
Total Final Energy Demand	89.9	104.5	110.4	120.5	118.0	120.1	2.6	0.9	2.2	-2.1	1.8
Solids	2.8	2.6	3.0	3.6	4.3	4.1	-1.1	2.3	4.2	21.5	-5.1
Oil	50.4	57.7	54.7	59.0	58.9	60.9	2.3	-0.9	1.9	-0.3	3.5
Gas	5.4	7.7	12.2	14.2	14.9	15.2	6.1	8.0	4.0	5.0	1.4
Electricity	6.3	8.9	11.0	12.4	13.0	13.4	5.8	3.6	3.0	5.0	3.1
Heat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biomass	25.0	27.6	29.5	31.2	26.8	26.5	1.7	1.1	1.4	-14.1	-1.0
CO2 Emissions in Mt of CO2											
Total	233	273	275	306	309	322.1	2.6	0.2	2.7	0.9	4.2
Excluding Bunkers and Air Transport	226	263	266	296	299	311.5	2.5	0.2	2.7	1.0	4.2
Indicators											
Population (Million)	137.9	155.9	175.8	190.2	192.8	196.3	2.1	2.0	2.0	1.4	1.8
GDP (Index 1985 = 100)	83.0	102.1	104.7	111.1	113.8	116.7	3.5	0.4	1.5	2.5	2.5
Gross Inl. Consumption/GDP (toe/1985 MECU)	424	398	406	419	401	373	-1.1	0.3	0.8	-4.4	-6.9
Gross Inl. Consumption/Capita (toe/inhabitant)	0.86	0.88	0.81	0.83	0.80	0.76	0.3	-1.2	0.3	-3.4	-4.9
Electricity Generated/Capita (kWh/inhabitant)	638	804	988	1101	1141	1135	3.9	3.5	2.7	3.6	-0.5
CO2 Emissions/Capita (t of CO2/inhabitant)	1.69	1.75	1.57	1.61	1.60	1.64	0.6	-1.8	0.7	-0.5	2.4
Net Imports/Gross Consumption (%)	25.7	18.3	-0.9	-4.5	-5.0	-4.7	-5.6	-	48.2	10.2	-5.6

(1) Includes nuclear, hydro and wind, bet imports of electricity and biomass.

PART XII

SHORT-TERM ENERGY OUTLOOK FOR THE EUROPEAN UNION



SHORT-TERM ENERGY OUTLOOK FOR THE EUROPEAN UNION

SUMMARY

According to provisional monthly data, total primary energy demand in the European Union decreased in 1993 by almost 1%. This demand behaviour is due mainly to the economic recession, of -0.3%, and the continuing restructuring of industry in the new German Länder. Consumption of oil decreased by over 1% mainly on account of reductions in industry and power generation, and overall demand for solid fuels dropped by almost 10% due to lower demand in electricity production as well as in the industrial sector. Gas consumption increased by about 6%. The contribution of nuclear and hydro power to total energy demand also increased by around 5%.

Considering that the European economy is forecast to grow by 1.6% in 1994 and 2.5% in 1995, total primary energy demand is expected to grow by 1.1% and 2.1% respectively. Oil prices in 1994 on average are expected to remain below the 1993 level and to increase somewhat in 1995 to under 17 US$/bbl. Natural gas demand is expected to grow by about 6% in 1994 and 1995. This growth is mainly due to increased use in power generation.

Electricity demand is expected to continue to grow slightly faster than GDP, by 1.8% and 2.6% in 1994 and 1995 respectively. Given that nuclear is expected to increase (although more slowly than in the recent past as available generating capacity is reaching stability) and that natural gas use in power stations is expected to accelerate, coal use will likely continue decreasing in 1994 and 1995.

A summary of the main assumptions and results of this "Short-Term Energy Outlook" is presented in the table below.

SUMMARY OF MAIN ASSUMPTIONS AND RESULTS *(Last revision: 15 June 1994)*

							Annual Percentage Change					
	1990	1991	1992	1993	*1994*	*1995*	1990	1991	1992	1993	*1994*	*1995*
A.MAIN ASSUMPTIONS												
Indices (1990=100)												
Gross Domestic Product	100.0	101.2	102.1	101.8	*103.5*	*106.0*	3.0	1.2	0.9	-0.3	**1.6**	**2.5**
Private Consumption	100.0	101.6	102.9	103.0	*103.8*	*105.2*	3.3	1.6	1.4	0.1	*0.7*	*1.4*
Industrial Production	100.0	99.8	98.8	95.9	*98.2*	*101.7*	1.8	-0.2	-1.0	-2.9	*2.4*	*3.5*
Consumer Prices	100.0	105.0	109.5	113.3	*117.1*	*120.5*	5.7	5.0	4.2	3.5	*3.3*	*2.9*
Exchange rate (ECU = .US$)	1.273	1.241	1.297	1.172	*1.118*	*1.123*	15.5	-2.6	4.6	-9.6	*-4.6*	*0.4*
Imported Crude Oil Price per barrel												
(current US$)	22.8	19.4	18.4	16.1	*14.7*	*16.8*	29.2	-14.7	-5.2	12.4	*-8.8*	*14.1*
(current ECU)	17.7	15.7	14.2	13.7	*13.2*	*14.9*	10.7	-11.5	-9.3	-3.3	*-4.3*	*13.7*
(1990 ECU)	17.6	14.9	12.9	12.1	*11.2*	*12.4*	4.5	-15.5	-13.0	-6.5	*-7.5*	*10.5*
Degree Days	2140	2547	2355	2352	*2390*	*2460*	-3.3	19.0	-7.6	-0.1	*1.6*	*2.9*
B.MAIN RESULTS												
Total Gross Inland Consumption (Mtoe)	1193.5	1211.7	1208.0	1199.6	*1212.6*	*1238.0*	0.4	1.5	-0.3	-0.7	*1.1*	*2.1*
of which:												
Solids	291.0	274.1	256.2	231.6	*225.2*	*221.3*	-1.9	-5.8	-6.5	-9.6	*-2.7*	*-1.8*
Oil	510.2	525.2	535.0	529.0	*529.5*	*538.7*	1.2	2.9	1.9	-1.1	*0.1*	*1.7*
Gas	214.3	231.6	229.7	242.8	*257.1*	*272.8*	2.2	8.1	-0.9	5.7	*5.9*	*6.1*
Nuclear	158.6	160.8	166.7	174.7	*178.1*	*182.0*	-1.0	1.4	3.7	4.8	*1.9*	*2.2*
Reneweables	17.8	19.4	19.4	19.9	*21.0*	*21.8*	10.8	9.2	0.1	2.4	*5.9*	*3.8*
Electricity (TWh)												
Gross Generation	1907	1961	1978	1980	*2013*	*2067*	1.5	2.9	0.9	0.1	*1.7*	*2.7*
Available for Internal Market	1799	1837	1854	1867	*1901*	*1951*	1.4	2.1	0.9	0.7	*1.8*	*2.6*
Intensities (1990=100)												
Total Energy	100.0	100.3	99.1	98.7	*98.2*	*97.8*	-2.5	0.3	-1.2	-0.4	*-0.5*	*-0.4*
Electricity	100.0	100.9	100.9	101.9	*102.2*	*102.3*	-1.5	0.9	0.0	1.0	*0.2*	*0.1*
CO2 Emissions (1990=100)	100.0	101.7	100.0	98.6	*98.6*	*99.8*	0.6	1.7	-1.7	-1.3	*0.0*	*1.1*

Sources: EUROSTAT, DG II, DG XVII

METHODOLOGICAL NOTE

The unification of Germany in SOEC statistics as of 1991, in terms of energy demand and supply, prices and macro economic data, caused a change in the whole historical data base. The monthly data since 1991 were taken directly from SOEC statistics while data between January 1985 and December 1990 were constructed with the help of Dr. J. Hesselbach of the IFE Leipzig GmbH. This implied the re-estimation of our econometric model, its equations and respective coefficients. The new historical data base, which is calculated on a monthly basis and then treated by quarters, covers the period from January 1985. Despite the efforts to make monthly data compatible with yearly information, the annual gross inland consumption in this STEO is slightly different from the values shown in the summary energy balance of the European Union in Part II.

The opportunity was also taken to revise all other historical data and to introduce some modifications both in their treatment and in the tables of results. The model is now calculated on the basis of: energy demand and supply data in energy units (toe); and energy prices and macro economic variables in constant prices and exchange rates. Therefore, where some results are shown in specific units (for example in the case of electricity), they were converted from heat equivalent units using conversion factors. The reason for this new approach lies in the fact that an economic system consumes energy in the form of services (for example process heat in industry and space heating in households) and not as "fuels" in specific units.

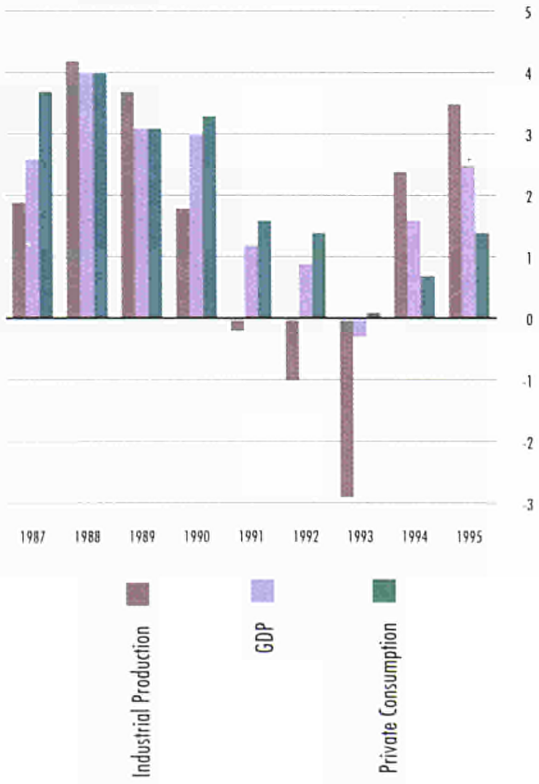
The methodology underlying the short-term energy outlook of the European Union continues to be basically the same as that developed since 1987 by our colleague Nikitas Deimezis, who sadly died, prematurely, in 1993. We hope that our work can honour his memory.

WORKING ASSUMPTIONS FOR 1994 AND 1995

As with any other energy outlook model, there is a number of key exogenous variables which are the driving factors for the forecasts. In the STEO, these are:

• GDP growth rates of 1.6% and 2.5% are expected for 1994 and 1995 respectively[4]; industrial activity increasing 2.4% in 1994 and 3.5% in 1995; and private consumption growing 0.7% and 1.4% in 1994 and 1995 respectively;

MACROECONOMIC INDICATORS



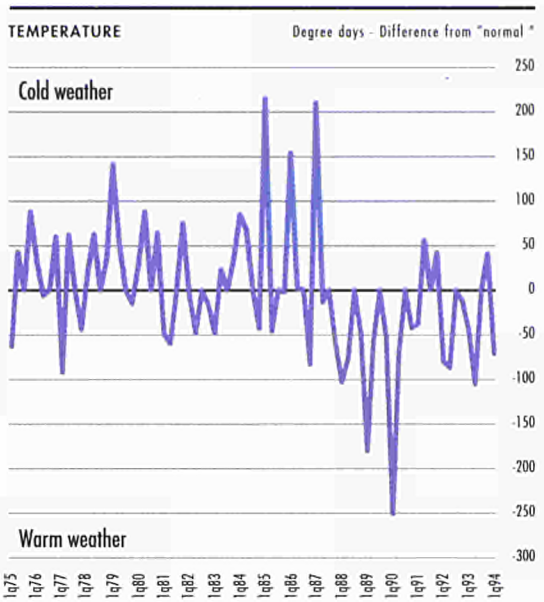
[4] *Macroeconomic assumptions are based on the latest information provided by the European Commission's Directorate General for Economic Affairs (DG II).*

• "Normal" [5] weather conditions are assumed as of the second quarter of 1994 to end 1995;

• Finally, the average price for imported crude oil into the European Union is assumed to be 14.7 US$/bbl in 1994 and 16.8 US$/bbl in 1995.

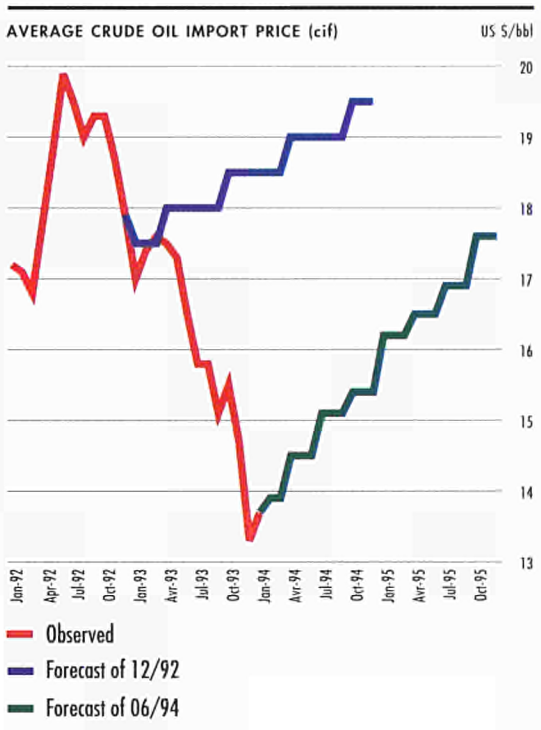
After three years of low economic performance including a recession in 1993, the assumptions on GDP growth imply a relaunch of the European economy although in 1994 it would not yet be close to the average growth of the last three decades (2.3% per year). Only in 1995 is GDP growth expected to be higher than the historical average.

Inflation in 1994 is expected to be lower than in 1993 (slightly above 3%) and to continue to slow down in 1995 to under 3%. The ECU/US nominal exchange rate, unlike in previous STEOs, is assumed to vary in time with a small depreciation in 1994 and a slight increase in 1995.



[5] *Normal weather is defined as the average historical observations in the European Union.*

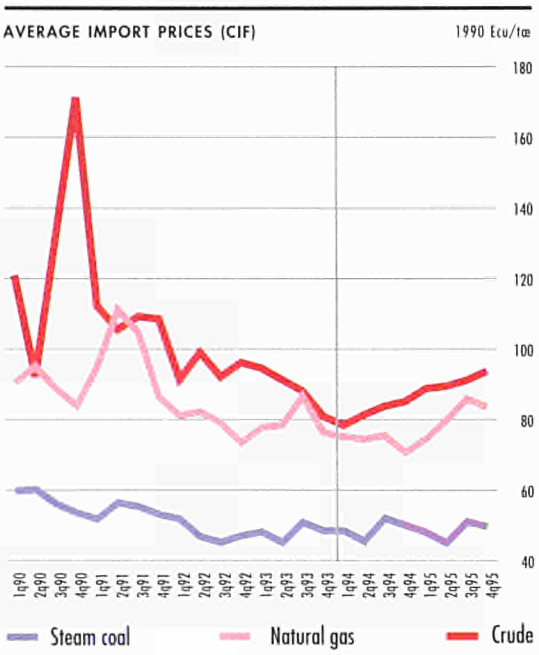
Crude oil import prices have steadily declined since May 1992 to December 1993. In the first quarter of 1994, prices have firmed up somewhat but to some extent in line with the normal seasonal variation. This evolution resulted in a average crude oil price of 16.1US$/bbl in 1993, or 12% below the 1992 average. Crude prices could start rising in 1994 as demand firms up mainly in the West as economic growth accelerates out of the recession. Given this situation, we assume that import crude oil prices could average 14.7 US$/bbl in 1994 and 16.8 US$/bbl in 1995, which is still below the 1992 average. The assumption that the US Dollar will likely increase versus the ECU in 1994, results in a lower decrease of the average crude import price in ECU compared to 1993. In 1995 we have the inverse situation, with crude prices in ECU increasing less than in US Dollars due to the appreciation of the ECU.



RESULTS

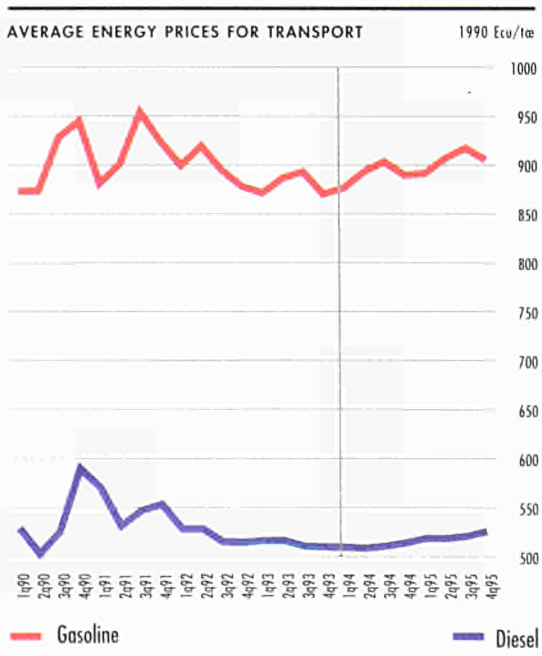
The results of the new model with the above-mentioned working assumptions are shown in this section. Some analysis of the expected energy prices, global energy balance and summary balances by fuel are given below. There is also some discussion of energy indicators and a simple table of the evolution of CO2 emissions is shown.

ENERGY PRICES



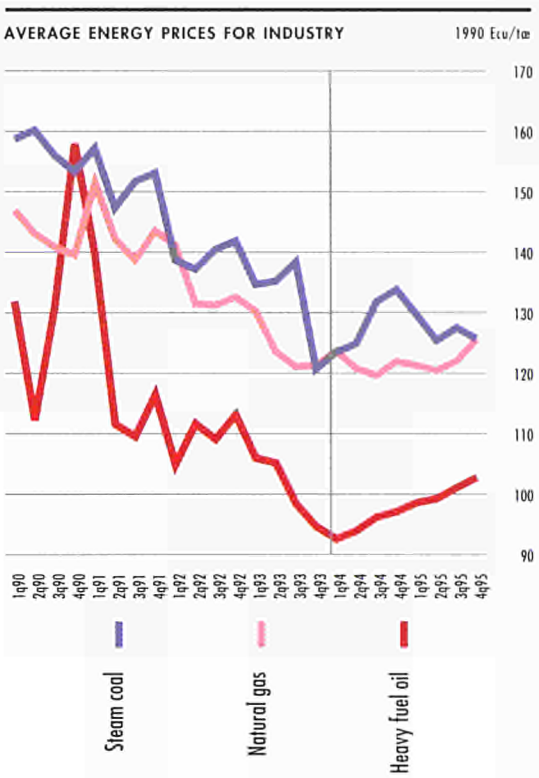
The **import prices** of natural gas and steam coal have been derived from those of crude oil. In general, we expect steam coal import prices to remain relatively flat while those of natural gas will likely follow a similar evolution to crude oil prices.

Energy **prices for final consumers** are influenced by the trends shown by its corresponding primary sources and take into account European Union average excise and VAT taxes. Average excise taxes are assumed to increase in real terms in 1994 and 1995, in line with developments in the recent past. However, a word of caution is necessary. Indeed, sensitivity analysis on final energy prices (and thus on excise taxes) indicate rather small demand reactions in the short term.

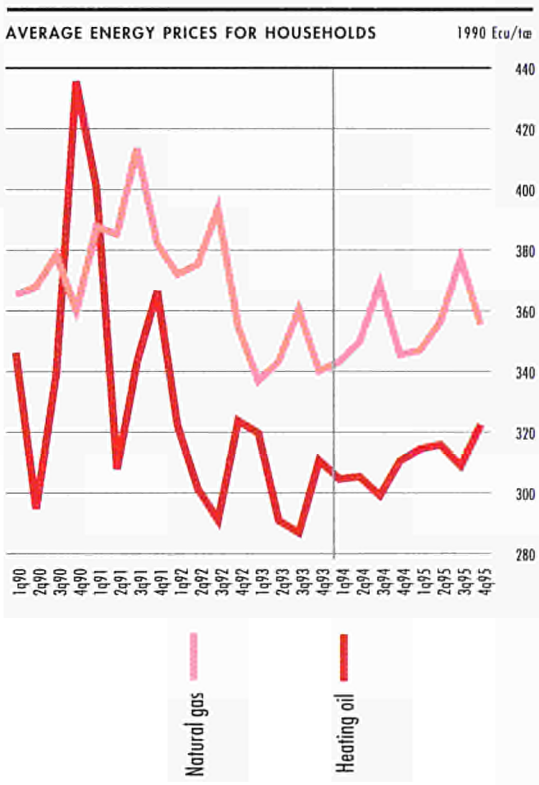


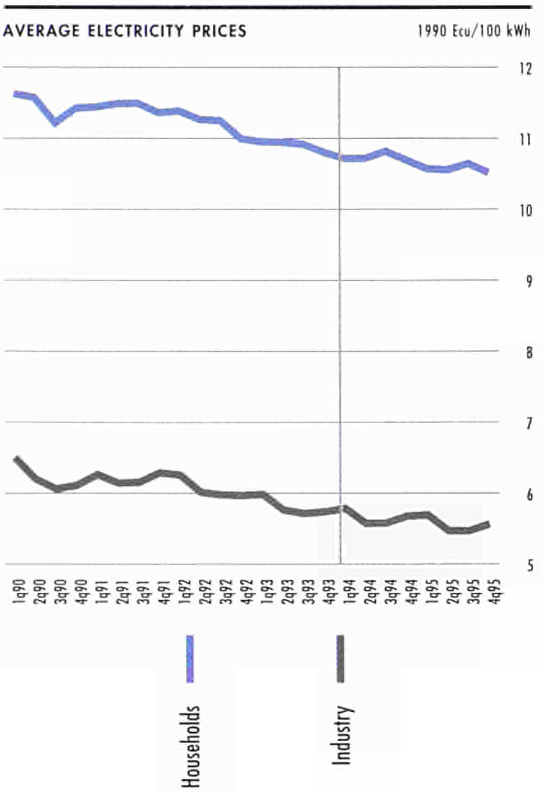
Average annual prices for **transport fuels** (gasoline and diesel) for final consumers have slightly declined in real terms since 1991. This trend is expected to continue in 1994 only for diesel oil. In 1995 both these prices are expected to increase. Despite this increase in 1995, these fuel prices will not yet reach the 1991 levels.

For **industrial consumers**, the downward trend observed since 1991 in natural gas and steam coal prices is likely to continue. The decline in natural gas prices for industry is halted in 1995 and towards the end of the year some increase is expected. The model forecasts heavy fuel oil prices rising from a five year low from 1994, but still barely reaching 1993 prices in 1995. In comparative terms, heavy fuel oil is likely to continue to be the most competitive fuel but with natural gas and steam coal catching up. Due to the weight of domestic high-price steam coal in industrial demand, average coal price is not competitive in this sector.



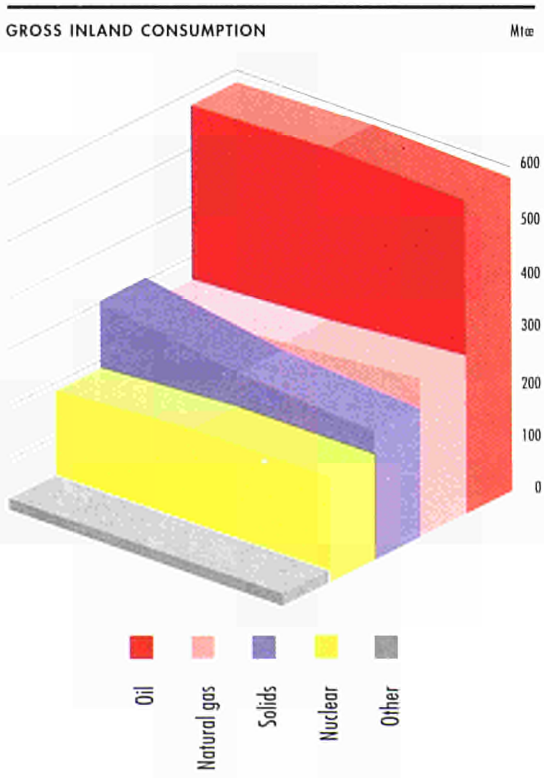
Heating oil and natural gas prices for the **domestic sector** are likely to increase in real terms in 1994 and 1995. Given that the increase in heating oil is a little higher than that for natural gas the gap is likely to close. Natural gas could therefore improve its competitive position, whilst remaining more expensive than heating oil in equivalent energy terms.





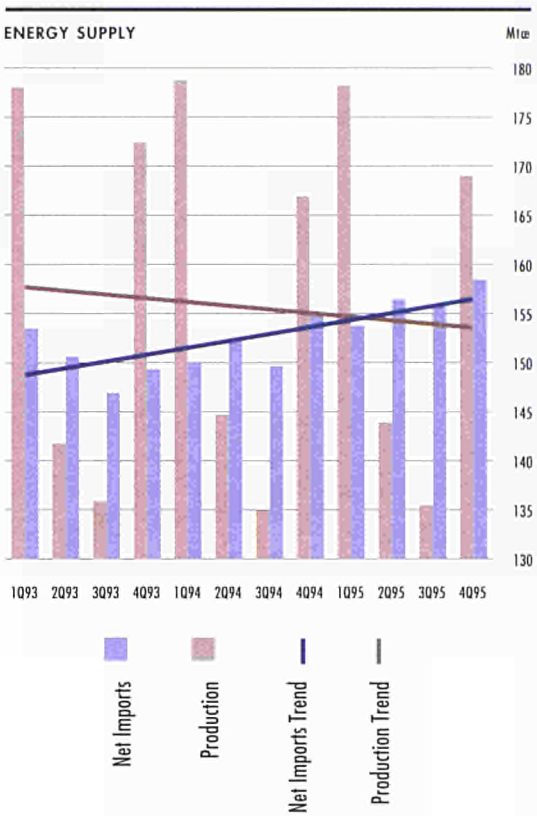
Electricity prices for both industrial and domestic users are likely to continue to show a downward trend of between 1.5% and 2.5% per year in real terms.

ENERGY DEMAND



A growth in total energy demand of 1.1% is expected in 1994 and 2.1% in 1995. While the increase in 1995 is due to a GDP growth of 2.5%, the increase in 1994 does not only result from the economic recovery but also from the assumption that more normal weather conditions will apply. This means almost 2% higher heating degree-days than in 1993. Results show solid fuels steadily losing their share in total energy demand from 24% in 1990 to 19% in 1994 and a further 1% drop in share in 1995. The oil share in total remains relatively flat at around 44%. Natural gas became the second most important fuel in 1993 and its share is the only one that steadily increases, rising from 18% in 1990 to 22% in 1995. The contribution of nuclear increased from 13% in 1990 to about 15% in 1993, but is expected to flatten around this share.

Total domestic energy **production** shows a very slight downward trend due to significant reductions in hard coal production. In fact, all other primary sources have been increasing and are expected to continue to grow in the near future. Nevertheless, net imports are increasing relatively and the energy import dependency of the European Union is likely to exceed 50% by 1995.



Solid Fuels

Total demand for solid fuels has decreased steadily since 1990. The economic recession of 1993 accentuated this negative trend and solid fuels demand dropped drastically by about 10% in that year. The downward trend is expected to continue in the near future although slowing down to falls of 4.7% in 1994 and 2.4% in 1995. The power generation sector is the driving force for solid fuels demand. This influence is likely to be reinforced in the future given that industry and the domestic and tertiary sectors are expected to continue to switch away from coal due to its uncompetitive price and inconvenience of use. However, the contribution of solid fuels for electricity generation is also expected to decrease in future as increasing volumes of natural gas are used for this purpose.

Because of German unification and its importance in terms of lignite consumption, we have to split the analysis on solid fuels between hard coal and lignite. Production of hard coal in 1993 was some 14% down from the 1992 level. From 1990 to 1993, the European Union cut its production of hard coal by over 26 Mtoe (about 40 Million metric tons). At the same time net imports of hard coal increased by only 11 Mtoe between 1990 and 1992 but dropped 16% in 1993 due to the overall depression in demand for this fuel. Hard coal production in 1994 and 1995 is expected to continue to fall by some 20 Mtoe in these two years. However, due to continuing slack demand, net imports of hard coal are likely to fall by 2% in 1994. Some recovery in demand is expected in 1995, a growth of about 3%, leading to a total level in 1995 which is still 2.5 Mtoe below the 1990 import level.

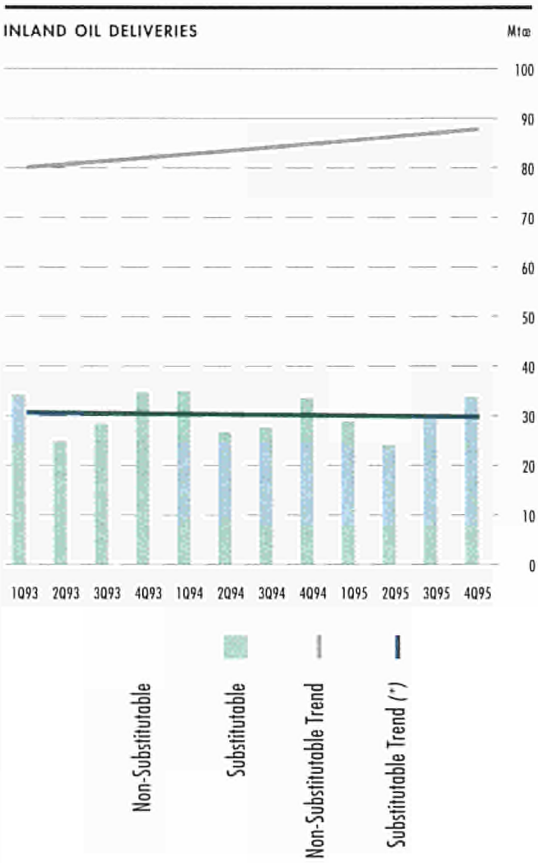
In terms of hard coal deliveries to industrial consumers we expect some demand recovery in 1994 and a downturn again in 1995. By the end of 1995, the level of consumption is expected to be 20% below 1992. The domestic and tertiary sectors show a continuing downward trend.

Production and consumption of coke are intimately associated with the activity levels of the iron and steel industry and of some domestic and tertiary consumers. In both these sectors, demand for coke shows a continuing downward trend.

Lignite production is very much linked to the power generation sector. Production of this fuel was significantly reduced between 1990 and 1993 (by one third, or almost 30 Mtoe) due to the full economic restructuring of the former GDR. This downward trend seems to have come to a halt and we expect production to remain relatively flat in 1994 and 1995.

Final consumption of lignite in 1994 and 1995 will only represent about 4% of total domestic production. This corresponds to a significant reduction (almost 90% cut from 1990) due to the deep industrial reforms in the former GDR.

Oil



(*) *Includes non-energy uses.*

Gross inland consumption of oil is expected to be flat in 1994 (0.1%) and to recover in 1995 (1.7%) after the 1993 downward swing of slightly over 1%. Domestic production of crude oil is expected to continue to increase, although slowly, and to meet some 23% of domestic refining needs throughout the period. This percentage has been relatively stable since 1990. At the same time, refinery outputs have satisfied 97% and 98% of total oil product deliveries in 1990 and 1993 respectively: This share is expected to stay above 98% in 1994 and 1995.

Transport fuels increasingly dominate the oil sector. For the purpose of this short-term analysis, gasoline, automotive diesel and kerosene are considered "non-substitutable" fuels and clearly have an upward trend. Oil products for power generation, industrial and domestic applications (heavy fuel oil and heating oil) are seen as substitutable. For 1994 and 1995, these follow a relatively steady trend without declining. This has direct implications for the refining sub-sector as the output barrel is becoming increasingly lighter. Indeed, the production of transport fuels in total refinery output increased three percentage points since 1985; they are expected to represent about 68% of total output by 1995.

Oil use for power generation could start declining in 1994 or 1995. Despite very attractive prices, it seems that heavy fuel oil will be replaced by natural gas, for which a number of units are being constructed. In addition, the use of heavy fuel oil presents environmental problems for power generators due to its relatively high sulphur content, compared to gas.

Crude oil production in the European Union is expected to continue to grow, although barely at the rate of total oil demand. Oil import dependency has thus shown a net increase since 1993, although by 1995 it is still expected to be lower than in 1992.

Natural Gas

Natural gas demand has increased steadily since 1992. In 1993, gas was the only fossil fuel with an increase in demand due to higher consumption in both power generation (4.1%) and final consuming sectors (6%). In 1994 and 1995, we expect natural gas demand to increase significantly by about 6% per year. These high growth rates result from: continued penetration in final demand sectors (5.3% and 3.9% increase in 1994 and 1995 respectively); and a strong inroad in the power generation sector with growth rates of 10.1% in 1994 and 21.3% in 1995. With this expected trend, the share of natural gas for power generation in total gross inland gas consumption in 1995 is likely to be 15% against 13% in 1990. This means that any substantial "dash-for-gas" is likely to be evident only in the second half of the 1990s.

Both the historical and expected high growth rates for gas demand result from different reasons. First, natural gas is still a relatively "young" fuel in the European economy. Second, natural gas prices for industry and power generation became very competitive after 1986, mainly in the latter sector when used with combined cycle technology. Third, gas prices are competitive against heating oil for household uses and once domestic consumers have converted to this fuel, they practically become captive consumers. Fourth, the current perception of gas reserve volumes and access has substantially improved due to relatively large reserves in Northern Europe (Norway) and to the radical political and economic changes in the former USSR. Last but not least, gas has obvious advantages for environmental protection both in terms of SO2 and CO2 emissions.

Domestic production of natural gas is expected to increase by about 2% per year over the next two years. However, this increase is clearly below the growth rates in demand, resulting in significant growth in net import volumes (10% in 1994 and 2% in 1995).

Electricity

Electricity is at the forefront of current preoccupations of both policy makers and operators as it constitutes a central point in the energy balance. In fact, final demand for electricity has increased constantly for many years and generally faster than GDP. Moreover, electricity generation is increasing with nuclear capacities nearing stabilisation and only a small contribution from renewable sources, implying significant investments required in thermal plants. Electricity determines the demand for coal to a large extent and it will be a major influence on future natural gas demand increments. In addition, this sector of energy is under the scrutiny of environmental policy makers, as it is an important emitter of SO2, NOx and CO2.

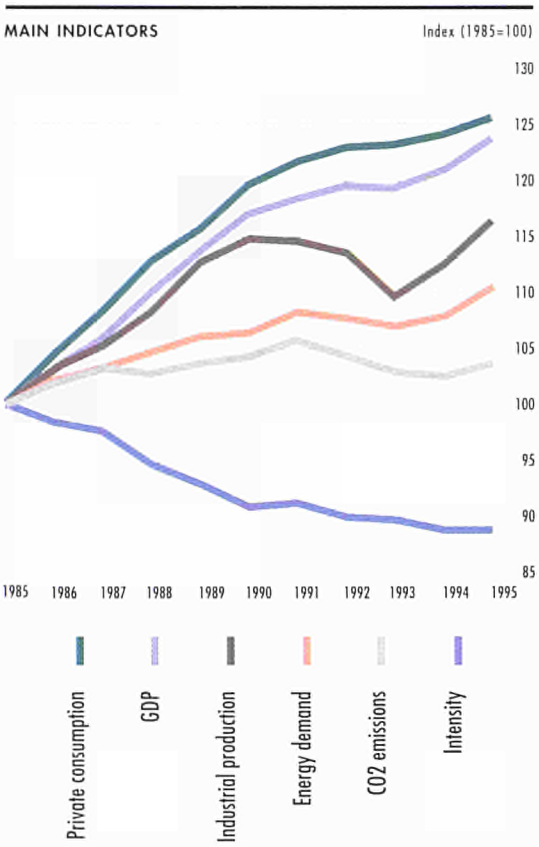
Final demand of electricity is expected to grow by 1.9% in 1994 and 2.6% in 1995. This results in total net generation increasing by 1.7% and 2.7% in 1994 and 1995 respectively. Nuclear electricity production is likely to increase by 2.0% in 1994 and 2.5% in 1995. These relatively low growth rates compared to recent history result from the fact that total nuclear installed capacity is practically flat from 1993 onwards (a slight loss in 1994 of 0.7 GW and a 0.3 GW increase in 1995) and only an improvement of its load factor is expected. Hydropower production, which is exogenous in the model, was assumed to increase according to an "average" hydrological year. Geothermal production is almost flat and at insignicant levels. These three sources together are expected to account for 45% of gross generation in 1994 and 1995.

Conventional thermal generation of electricity is mainly based on solid fuels, oil and natural gas. In 1993, these fuels' contributions to total thermal inputs were 61% (42% hard coal and 19% lignite), 18% and 14% respectively. In 1994 and 1995 the share of solid fuels is expected to remain relatively stable. The share of oil in the next two years is also expected to remain relatively flat between 19% and 20% of total inputs. Natural gas use for power generation is expected to increase by 10.1% in 1994 and to boom in 1995 (21.3%) when its share in total inputs will likely be about 16% (an increase in share of over 4% in two years).

ENERGY INDICATORS

The chart below shows some key indicators. It is clear that industrial activity kept pace with GDP until 1989. Between 1989 and 1993, GDP grew faster than industrial production but slower than private consumption as the weight of the services sector increased. However, the macro-economic assumptions for 1994 and 1995 are more in line with the type of growth of the 1980s, with a relatively strong industrial recovery and a moderate increase in private consumption.

These changes in GDP structure have a clear influence on energy demand developments and on the fuel mix. Indeed, private consumption tends to drive domestic energy use, particularly in private transport. The transport sector has been increasing and is expected to continue to do so.



In spite of some car technology innovations (mainly in the first part of the 1980s), this development is in part due to the behaviour of individuals (tendency to buy bigger cars as income rises), the current type of urbanisation and the respective traffic conditions. Thus energy efficiency improvements tend to be quite small. On the other hand, increasing industrial activity often brings more competitive ways of using energy (technology and equipment improvements) through faster capital turnover. The overall energy intensity of our economic system is the result of the combination of all these different behaviours.

From the chart it seems clear that most of the gains in energy intensity occurred in the second half of the 1980s when industrial activity was driving more of the GDP growth. In the early 1990s it seems that with decreasing industrial activity, the domestic and services sector were driving the energy system and thus slowing down the trend of intensity gains. For 1994 and 1995, despite a gain in industry weight in total GDP, energy intensity improvements seem not about to accelerate. One of the reasons for this behaviour is that most of the industrial uptake can occur by increasing the utilisation factor of existing capacity and probably not through increased investment in new processes and equipment.

CO2 emissions result not only from the total amount of energy consumed but also from the fuel mix used. In terms of the link with total demand, it can be seen that emissions have grown less rapidly, mainly after 1990. This results from the fact that emissions from power generation have decreased while those from some final consuming sectors (mainly transport) have increased. A similar type of development is expected for 1994 and 1995. The efforts to contain CO2 emissions continue to come from the power generation sector. Indeed, given that this sector still expects some increase in nuclear energy contribution, a decrease or stabilisation of solid fuels consumption and a significant increase of natural gas to meet increasing needs, it will largely influence future CO2 emissions. According to the results of the STEO we expect that the European Union will emit less CO2 in 1995 than in 1990. However, it seems there is a clear upward trend in emissions again after 1993.

The following tables show the detailed results of the STEO.

CO2 EMISSIONS

	1990	1991	1992	1993	1994	1995	Annual Percentage Change 1991	1992	1993	1994	1995
EMISSIONS INDICES (1990=100)											
TOTAL	100.0	101.7	100.0	98.6	*98.6*	*99.8*	1.7	-1.7	-1.3	*0.0*	*1.1*
Power Generation	100.0	102.5	100.2	96.4	*94.6*	*96.2*	2.5	-2.3	-3.9	*-1.8*	*1.7*
Final Consumption	100.0	101.1	99.8	97.1	*99.3*	*100.8*	1.1	-1.2	-2.7	*2.3*	*1.5*
Solid Fuels	100.0	97.6	91.4	82.4	*80.5*	*79.0*	-2.4	-6.3	-9.8	*-2.3*	*-1.8*
Liquid Fuels	100.0	103.6	104.7	107.9	*107.6*	*109.1*	3.6	1.1	3.0	*-0.3*	*1.4*
Gaseous Fuels	100.0	105.1	104.8	108.3	*112.6*	*117.7*	5.1	-0.3	3.3	*3.9*	*4.5*
Other Fuels	100.0	103.0	95.8	98.1	*99.6*	*97.8*	3.0	-6.9	2.3	*1.5*	*-1.8*

Source: DG XVII.

MACROECONOMIC. OIL PRICE AND WEATHER ASSUMPTIONS

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. MACROECONOMIC INDICES (1990=100)																		
A.1. Gross Domestic Product	119.6	119.3	119.6	120.0	*120.6*	*121.1*	*121.9*	*122.6*	*123.3*	*124.1*	*125.0*	*125.9*	100.0	101.2	102.1	101.8	*103.5*	*106.0*
Percentage change																		
from prior year	-0.5	-0.4	-0.3	0.1	*0.8*	*1.6*	*1.9*	*2.2*	*2.3*	*2.5*	*2.6*	*2.7*	3.0	1.2	0.9	-0.3	*1.6*	*2.5*
from prior quarter	-0.3	-0.3	0.3	0.3	*0.5*	*0.5*	*0.6*	*0.6*	*0.6*	*0.6*	*0.7*	*0.7*						
A.2. Private Consumption	123.7	123.1	123.5	124.0	*124.1*	*124.2*	*124.6*	*124.9*	*125.4*	*125.9*	*126.4*	*127.0*	100.0	101.6	102.9	103.0	*103.8*	*105.2*
Percentage change																		
from prior year	0.8	0.1	-0.1	-0.3	*0.3*	*0.9*	*0.8*	*0.8*	*1.0*	*1.4*	*1.5*	*1.7*	3.3	1.6	1.4	0.1	*0.7*	*1.4*
from prior quarter	-0.5	-0.5	0.4	0.4	*0.1*	*0.1*	*0.3*	*0.3*	*0.4*	*0.4*	*0.4*	*0.5*						
A.3. Industrial Production	110.6	110.0	110.3	110.7	*111.6*	*112.5*	*113.5*	*114.5*	*115.5*	*116.5*	*117.5*	*118.5*	100.0	99.8	98.8	95.9	*98.2*	*101.7*
Percentage change																		
from prior year	-4.4	-3.6	-2.9	-0.6	*0.9*	*2.3*	*2.9*	*3.5*	*3.5*	*3.5*	*3.5*	*3.5*	1.8	-0.2	-1.0	-2.9	*2.4*	*3.5*
from prior quarter	-0.6	-0.6	0.3	0.3	*0.8*	*0.8*	*0.9*	*0.9*	*0.8*	*0.8*	*0.9*	*0.9*						
A.4. Iron&Steel Production	97.1	96.8	95.3	93.8	*98.2*	*97.9*	*96.4*	*94.8*	*100.6*	*100.3*	*98.7*	*97.2*	100.0	98.3	95.2	93.0	*94.1*	*96.4*
Percentage change																		
from prior year	-4.2	-3.9	-3.0	2.4	*1.1*	*1.1*	*1.1*	*1.1*	*2.4*	*2.4*	*2.4*	*2.4*	-4.4	-1.7	-3.2	-2.3	*1.1*	*2.4*
from prior quarter	6.0	-0.3	-1.5	-1.6	*4.7*	*-0.3*	*-1.5*	*-1.6*	*6.0*	*-0.3*	*-1.5*	*-1.6*						
A.5. Chemical Industry	116.2	115.5	115.3	116.2	*116.8*	*117.2*	*117.4*	*117.3*	*117.6*	*118.0*	*118.3*	*118.6*	100.0	100.8	103.2	99.6	*100.8*	*101.6*
Percentage change																		
from prior year	-3.4	-4.6	-4.1	-2.0	*0.6*	*1.5*	*1.8*	*0.9*	*0.6*	*0.7*	*0.8*	*1.1*	1.1	0.8	2.5	-3.5	*1.2*	*0.8*
from prior quarter	-2.1	-0.6	-0.1	0.8	*0.5*	*0.4*	*0.1*	*0.0*	*0.2*	*0.4*	*0.2*	*0.2*						
A.6. Consumer Prices	112.1	113.3	114.0	114.9	*115.9*	*116.9*	*117.9*	*118.8*	*119.3*	*120.3*	*121.3*	*122.3*	100.0	105.0	109.5	113.3	*117.1*	*120.5*
Percentage change																		
from prior year	3.5	3.4	3.5	3.5	*3.4*	*3.2*	*3.4*	*3.4*	*2.9*	*2.9*	*2.9*	*2.9*	5.7	5.0	4.2	3.5	*3.3*	*2.9*
from prior quarter	0.9	1.1	0.6	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.4*	*0.8*	*0.8*	*0.8*						
B. EXCHANGE RATE																		
(1 ECU = xx US $)	1.191	1.208	1.150	1.141	1.118	*1.118*	*1.118*	*1.118*	*1.123*	*1.123*	*1.123*	*1.123*	1.273	1.241	1.297	1.172	*1.118*	*1.123*
Percentage change																		
from prior year	-5.7	-5.0	-17.0	-10.0	-6.1	*-7.4*	*-2.8*	*-1.9*	*0.4*	*0.4*	*0.4*	*0.4*	15.5	-2.6	4.6	-9.6	*-4.6*	*0.4*
from prior quarter	-6.0	1.4	-4.8	-0.8	-1.9	*0.0*	*0.0*	*0.0*	*0.4*	*0.0*	*0.0*	*0.0*						
C. OIL PRICES																		
Imported Crude Oil																		
(cif.US$/barrel)	17.27	17.03	15.75	14.46	*13.85*	*14.50*	*15.06*	*15.42*	*16.21*	*16.47*	*16.92*	*17.55*	22.77	19.44	18.42	16.13	*14.71*	*16.79*
Percentage change																		
from prior quarter	-6.8	-1.4	-7.5	-8.2	*-4.2*	*4.7*	*3.8*	*2.4*	*5.1*	*1.6*	*2.7*	*3.7*	29.2	-14.7	-5.2	-12.4	*-8.8*	*14.1*
D. WEATHER																		
Degree Days	1126	269	0	957	*1101*	*373*	*0*	*916*	*1171*	*373*	*0*	*916*	2140	2547	2355	2352	*2390*	*2460*
Difference from average	-11	-105	0	41	*-70*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	-320	87	-106	-108	*-70*	*0*

Sources: EUROSTAT, DG II, DG XVII

IMPORT ENERGY PRICES

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. Crude Oil (cif)																		
Nominal Prices																		
US$/barrel	17.3	17.0	15.7	14.5	*13.9*	*14.5*	*15.1*	*15.4*	*16.2*	*16.5*	*16.9*	*17.6*	22.8	19.4	18.4	16.1	*14.7*	*16.8*
ECU/barrel	14.5	14.1	13.7	12.7	*12.4*	*13.0*	*13.5*	*13.8*	*14.4*	*14.7*	*15.1*	*15.6*	17.7	15.7	14.2	13.7	*13.2*	*14.9*
Growth rate from previous period in %																		
US$/barrel	-6.8	-1.4	-7.5	-8.2	*-4.2*	*4.7*	*3.8*	*2.4*	*5.1*	*1.6*	*2.7*	*3.7*	29.2	-14.7	-5.2	-12.4	*-8.8*	*14.1*
ECU/barrel	-0.8	-2.8	-2.9	-7.4	*-2.3*	*4.7*	*3.8*	*2.4*	*4.6*	*1.6*	*2.7*	*3.7*	10.7	-11.5	-9.3	-3.3	*-4.3*	*13.7*
Real Prices																		
90ECU/barrel	12.9	12.4	12.0	11.0	*10.7*	*11.1*	*11.4*	*11.6*	*12.1*	*12.2*	*12.4*	*12.8*	17.6	14.9	12.9	12.1	*11.2*	*12.4*
Growth rate from previous period in %																		
90ECU/barrel	-1.7	-3.8	-3.5	-8.2	*-3.1*	*3.8*	*2.9*	*1.6*	*4.3*	*0.8*	*1.9*	*2.9*	4.5	-15.5	-13.0	-6.5	*-7.5*	*10.5*
B. Steam Coal																		
Nominal Price																		
US$/tce	45.0	43.2	46.7	44.5	*44.0*	*41.6*	*48.0*	*46.5*	*45.0*	*42.5*	*48.6*	*47.7*	51.2	49.5	47.5	44.9	*45.0*	*46.0*
ECU/tce	37.8	35.8	40.6	39.0	*39.3*	*37.2*	*42.9*	*41.6*	*40.1*	*37.9*	*43.3*	*42.5*	40.3	40.0	36.7	38.3	*40.3*	*40.9*
Growth rate from previous period in %																		
US$/tce	-3.0	-4.0	8.1	-4.7	*-1.1*	*-5.4*	*15.2*	*-3.0*	*-3.3*	*-5.5*	*14.3*	*-1.9*	5.2	-3.4	-4.0	-5.6	*0.4*	*2.1*
ECU/tce	3.3	-5.3	13.5	-3.9	*0.8*	*-5.4*	*15.2*	*-3.0*	*-3.7*	*-5.5*	*14.3*	*-1.9*	-8.8	-0.8	-8.2	4.4	*5.1*	*1.6*
Real Prices																		
90ECU/tce	33.7	31.6	35.6	33.9	*34.0*	*31.9*	*36.4*	*35.0*	*33.6*	*31.5*	*35.7*	*34.7*	40.2	38.0	33.4	33.7	*34.3*	*33.9*
Growth rate from previous period in																		
90ECU/tce	2.4	-6.3	12.8	-4.7	*0.0*	*-6.2*	*14.3*	*-3.8*	*-4.0*	*-6.3*	*13.3*	*-2.7*	-13.7	-5.6	-11.9	0.9	*1.7*	*-1.2*
C. Natural Gas																		
Nominal Prices																		
US$/toe	103.7	107.3	113.5	100.0	*97.2*	*97.3*	*99.4*	*93.7*	*99.7*	*107.6*	*116.8*	*114.6*	114.1	129.2	112.4	106.1	*96.9*	*109.7*
US$/MMBtu	2.61	2.71	2.86	2.52	*2.45*	*2.45*	*2.51*	*2.36*	*2.51*	*2.71*	*2.95*	*2.89*	2.88	3.26	2.83	2.68	*2.44*	*2.77*
ECU/toe	87.0	88.9	98.7	87.7	*86.9*	*87.0*	*88.9*	*83.8*	*88.8*	*95.8*	*104.0*	*102.1*	89.8	104.6	86.6	90.6	*86.6*	*97.7*
ECU/MMBtu	2.19	2.24	2.49	2.21	*2.19*	*2.19*	*2.24*	*2.11*	*2.24*	*2.41*	*2.62*	*2.57*	2.26	2.64	2.18	2.28	*2.18*	*2.46*
Growth rate from previous period in %																		
US$	0.3	3.5	5.8	-11.9	*-2.8*	*0.1*	*2.2*	*-5.8*	*6.4*	*7.9*	*8.6*	*-1.9*	34.9	13.3	-13.0	-5.6	*-8.7*	*13.2*
ECU	6.8	2.1	11.1	-11.1	*-0.9*	*0.1*	*2.2*	*-5.8*	*6.0*	*7.9*	*8.6*	*-1.9*	16.9	16.5	-17.1	4.5	*-4.3*	*12.7*
Real Prices																		
90ECU/toe	77.7	78.4	86.6	76.3	*75.0*	*74.4*	*75.4*	*70.5*	*74.4*	*79.6*	*85.8*	*83.5*	89.6	99.3	79.0	79.7	*73.8*	*80.8*
90ECU/MMBtu	1.96	1.98	2.18	1.92	*1.89*	*1.88*	*1.90*	*1.78*	*1.88*	*2.01*	*2.16*	*2.10*	2.26	2.50	1.99	2.01	*1.86*	*2.04*
Growth rate from previous period in %																		
90ECU/toe	5.8	1.0	10.4	-11.9	*-1.7*	*-0.8*	*1.3*	*-6.5*	*5.6*	*7.0*	*7.7*	*-2.7*	10.8	10.9	-20.5	1.0	*-7.4*	*9.5*

Sources: EUROSTAT, DG XVII

FINAL CONSUMER ENERGY PRICES IN REAL TERMS

	Quarter												Yea					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. Oil Products																		
Prices (90ECU/toe)																		
Gasoline	871	886	893	870	*876*	*893*	*903*	*889*	*891*	*906*	*917*	*905*	905	915	898	880	*890*	*905*
Diesel	516	516	510	510	*509*	*508*	*510*	*514*	*519*	*519*	*521*	*526*	537	550	521	513	*511*	*521*
Heating Oil	320	291	287	311	*304*	*305*	*299*	*310*	*314*	*316*	*309*	*322*	354	354	310	302	*305*	*315*
Residual Fuel Oil	106	105	98	95	93	*94*	*96*	*97*	*99*	*99*	*101*	*103*	133	119	110	101	*95*	*100*
Growth rate from previous period in %																		
Gasoline	-0.8	1.7	0.7	-2.6	*0.7*	*1.9*	*1.2*	*-1.5*	*0.2*	*1.7*	*1.1*	*-1.3*	0.0	1.1	-1.9	-2.0	*1.2*	*1.6*
Diesel	0.3	0.0	-1.1	-0.1	*-0.1*	*-0.2*	*0.4*	*0.7*	*0.9*	*0.0*	*0.4*	*1.0*	5.3	2.5	-5.3	-1.6	*-0.5*	*2.0*
Heating Oil	-1.2	-9.0	-1.4	8.3	*-2.0*	*0.3*	*-2.0*	*3.8*	*1.3*	*0.4*	*-2.2*	*4.4*	6.1	0.1	-12.7	-2.4	*0.9*	*3.5*
Residual Fuel Oil	-6.4	-0.7	-6.5	-3.8	*-2.2*	*1.5*	*2.4*	*1.0*	*1.5*	*0.7*	*1.9*	*1.7*	8.6	-10.5	-8.1	-7.9	*-6.0*	*5.8*
B. Natural Gas																		
Prices (90ECU/toe)																		
Households	337	343	360	340	*343*	*350*	*369*	*345*	*347*	*356*	*377*	*355*	368	392	374	345	*352*	*359*
Industry	130	124	121	121	*124*	*121*	*120*	*122*	*121*	*120*	*122*	*126*	143	144	134	124	*121*	*122*
Growth rate from previous period in %																		
Households	-5.0	1.9	5.0	-5.6	*0.9*	*1.9*	*5.5*	*-6.3*	*0.4*	*2.7*	*5.8*	*-5.8*	2.6	6.6	-4.7	-7.7	*1.9*	*2.0*
Industry	-1.8	-5.1	-2.0	0.2	*1.9*	*-2.3*	*-1.0*	*2.0*	*-0.6*	*-0.7*	*1.3*	*3.0*	3.4	1.0	-6.9	-7.5	*-2.0*	*0.7*
C. Coal																		
Prices (90ECU/toe)																		
Industry	135	135	138	121	*123*	*125*	*132*	*134*	*130*	*125*	*127*	*126*	157	152	140	132	*128*	*127*
Power Generation	106	106	101	115	*103*	*101*	*101*	*104*	*104*	*99*	*99*	*100*	115	108	106	107	*102*	*100*
Growth rate from previous period in %																		
Industry	-5.1	0.4	2.4	-12.8	*2.3*	*1.1*	*5.6*	*1.5*	*-3.1*	*-3.3*	*1.7*	*-1.5*	0.4	-3.0	-8.4	-5.2	*-2.8*	*-1.1*
Power Generation	-3.9	-0.5	-4.7	14.2	*-11.1*	*-2.0*	*0.1*	*3.3*	*0.1*	*-4.7*	*-0.4*	*0.8*	-0.1	-6.7	-1.8	1.4	*-4.9*	*-1.4*
D. Electricity																		
Prices (90ECU/100kWH)																		
Households	10.95	10.95	10.92	10.81	*10.72*	*10.72*	*10.82*	*10.70*	*10.57*	*10.56*	*10.64*	*10.51*	11.46	11.45	11.23	10.91	*10.74*	*10.57*
Industry	5.98	5.77	5.71	5.74	*5.79*	*5.58*	*5.58*	*5.68*	*5.69*	*5.47*	*5.47*	*5.57*	6.22	6.21	6.05	5.80	*5.66*	*5.55*
Growth rate from previous period in %																		
Households	-0.4	-0.1	-0.2	-1.1	*-0.8*	*0.0*	*0.9*	*-1.2*	*-1.1*	*-0.2*	*0.8*	*-1.2*	-2.8	-0.1	-2.0	-2.8	*-1.5*	*-1.6*
Industry	0.3	-3.7	-0.9	0.4	*0.8*	*-3.6*	*0.1*	*1.7*	*0.3*	*-3.9*	*0.0*	*1.7*	-4.1	-0.1	-2.6	-4.2	*-2.5*	*-1.8*

Sources: EUROSTAT, DG XVII

SOLID FUELS: SUPPLY AND DISPOSAL (MTOE)

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. HARD COAL																		
Production	25.7	23.6	22.6	23.1	*23.1*	*20.8*	*19.4*	*19.5*	*20.6*	*18.9*	*17.7*	*17.9*	121.4	117.7	111.0	95.1	*82.8*	*75.1*
Growth rate from previous period in %		-8.2	-4.4	2.4	*-0.1*	*-10.0*	*-6.7*	*0.5*	*5.8*	*-8.6*	*-6.1*	*1.3*		-3.0	-5.7	-14.3	*-12.9*	*-9.2*
Net Imports	18.8	19.0	18.1	18.8	*17.7*	*17.9*	*18.5*	*19.1*	*18.4*	*18.5*	*18.9*	*19.7*	78.0	86.3	89.4	74.7	*73.2*	*75.5*
Growth rate from previous period in %		1.4	-4.9	4.1	*-6.1*	*1.4*	*3.2*	*2.9*	*-3.2*	*0.2*	*2.0*	*4.5*		10.6	3.6	-16.4	*-2.1*	*3.1*
Gross Inland consumption	44.0	43.3	41.0	45.1	*45.0*	*38.1*	*37.2*	*44.9*	*44.6*	*36.4*	*35.9*	*44.5*	201.6	201.9	192.7	173.3	*165.2*	*161.3*
Growth rate from previous period in %		-1.6	-5.3	*9.9*	*-0.1*	*-15.2*	*-2.4*	*20.5*	*-0.7*	*-18.3*	*-1.5*	24.1		0.1	-4.6	-10.1	*-4.7*	*-2.4*
Transformation Input	44.8	34.9	34.1	37.9	*39.0*	*32.2*	*31.8*	*38.6*	*38.7*	*31.6*	*31.0*	*37.7*	172.4	173.7	164.9	151.7	*141.7*	*139.0*
of which:																		
Power Generation	35.0	25.2	24.0	27.9	*30.2*	*23.3*	*22.6*	*29.2*	*30.5*	*23.3*	*22.3*	*28.8*	122.5	127.1	121.7	112.1	*105.3*	*104.9*
Growth rate from previous period in %		-27.9	-5.0	16.2	*8.2*	*-22.6*	*-3.3*	*29.3*	*4.3*	*-23.4*	*-4.3*	*28.9*		3.7	-4.2	-7.9	-6.1	*-0.3*
Cokeries	9.4	9.4	9.8	9.7	*8.6*	*8.6*	*9.0*	*9.1*	*8.0*	*8.0*	*8.5*	*8.6*	48.5	45.0	41.9	38.4	*35.3*	*33.1*
Growth rate from previous period in %		-0.4	4.5	-1.3	*-11.5*	*0.6*	*4.2*	*1.5*	*-12.3*	*0.3*	*5.5*	*1.8*		-7.3	-6.9	-8.4	-7.9	*-6.3*
Deliveries to Final Consumers	2.7	5.6	4.3	*8.1*	*6.0*	*5.9*	*5.4*	*6.3*	*5.8*	*4.8*	*4.9*	*6.9*	29.2	28.2	27.8	20.8	*23.6*	*22.3*
Growth rate from previous period in %		105.7	-24.2	89.9	*-26.8*	*-1.0*	*-7.9*	*15.4*	*-6.9*	*-17.7*	*1.2*	*40.9*		-3.4	-1.6	-25.1	*13.2*	*-5.1*
of which																		
Industry	0.9	4.0	2.8	6.4	*4.1*	*4.4*	*4.1*	*4.3*	*4.0*	*3.4*	*3.8*	*5.1*	20.9	19.3	20.3	14.0	*16.9*	*16.3*
Growth rate from previous period in %		336.1	-31.1	131.4	*-35.4*	*6.8*	*-5.7*	*3.6*	*-7.1*	*-13.6*	*9.3*	*35.2*		-7.6	5.2	-31.0	20.8	*-3.8*
Domestic	1.8	1.6	1.5	1.7	*1.8*	*1.5*	*1.3*	*1.9*	*1.8*	*1.3*	*1.1*	*1.7*	7.8	8.6	7.3	6.6	*6.5*	*5.9*
Growth rate from previous period in %		-8.9	-7.4	16.3	*3.2*	*-17.1*	*-14.3*	*50.4*	*-6.6*	*-25.2*	*-19.3*	*57.7*		10.2	-15.2	-8.4	-2.3	*-8.6*
B. COKE																		
Net Imports	0.1	0.1	0.1	0.1	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	0.7	0.7	0.5	0.3	*0.2*	*0.1*
Gross Inland consumption	-0.3	-0.2	-0.1	0.0	*0.2*	*0.2*	*0.0*	*0.1*	*0.2*	*0.2*	*0.1*	*0.2*	0.7	1.1	-0.2	-0.7	*0.4*	*0.7*
Coking Plants Production	7.4	7.3	6.9	6.7	*6.6*	*6.5*	*6.5*	*6.3*	*6.1*	*6.1*	*6.0*	*5.9*	37.5	33.2	31.0	28.4	*25.9*	*24.1*
Deliveries to Final Consumers	7.1	7.1	6.8	6.7	*6.8*	*6.7*	*6.5*	*6.4*	*6.3*	*6.3*	*6.1*	*6.0*	38.2	34.3	30.7	27.7	*26.4*	*24.8*
Growth rate from previous period in %		-0.7	-4.0	-1.7	*1.5*	*-1.2*	*-3.2*	*-1.5*	*-0.8*	*-0.9*	*-3.0*	*-1.3*		-10.3	-10.3	-9.9	*-4.8*	*-6.2*
Industry	4.7	4.3	3.9	3.6	*4.0*	*3.9*	*3.7*	*3.5*	*3.8*	*3.7*	*3.5*	*3.3*	23.0	20.2	17.9	16.4	*15.1*	*14.2*
of which Iron & Steel	4.1	3.8	3.4	3.2	*3.6*	*3.6*	*3.4*	*3.2*	*3.5*	*3.4*	*3.3*	*3.1*	20.5	18.5	15.9	14.6	*13.8*	*13.4*
Domestic	2.5	2.8	2.9	3.1	*2.8*	*2.8*	*2.8*	*2.9*	*2.6*	*2.6*	*2.6*	*2.7*	15.2	14.1	12.8	11.3	*11.3*	*10.5*
C. LIGNITE																		
Production	16.1	13.6	13.6	14.8	*16.0*	*14.3*	*13.3*	*14.2*	*15.9*	*14.3*	*13.4*	*14.3*	87.3	70.8	62.8	58.2	*57.8*	*57.9*
Gross Inland Consumption	16.6	13.8	13.8	15.1	*16.2*	*14.4*	*13.8*	*15.5*	*16.2*	*14.3*	*13.9*	*15.3*	88.9	71.6	64.0	59.3	*59.9*	*59.6*
Growth rate from previous period in %		-16.8	0.3	9.2	*7.5*	*-11.4*	*-3.9*	*11.8*	*4.5*	*-11.7*	*-2.5*	*9.9*		-19.4	-10.7	-7.3	*1.0*	*-0.5*
Transformation Input	15.2	13.9	13.6	14.7	*14.7*	*14.2*	*13.6*	*14.6*	*14.7*	*14.2*	*13.7*	*14.7*	70.2	65.0	60.4	57.4	*57.2*	*57.3*
Power Generation	13.4	11.8	11.9	12.8	*12.9*	*12.0*	*12.0*	*12.8*	*12.9*	*12.0*	*12.0*	*12.9*	48.8	52.5	52.2	49.9	*49.7*	*49.8*
Growth rate from previous period in %		-11.9	1.0	7.9	*0.4*	*-7.2*	*0.3*	*6.7*	*0.7*	*-7.0*	*0.4*	*6.7*		7.6	-0.5	-4.4	-0.5	*0.2*
Briquette Plants	1.9	2.1	1.7	1.9	*1.8*	*2.2*	*1.6*	*1.8*	*1.8*	*2.2*	*1.6*	*1.8*	21.4	12.6	8.2	7.5	*7.5*	*7.5*
Growth rate from previous period in %		13.4	-20.5	13.5	*-2.6*	*19.3*	*-26.0*	*11.6*	*0.9*	*20.4*	*-25.8*	*11.6*		-41.3	-34.7	-8.4	-0.3	*0.2*
Deliveries to Final Consumers	1.3	0.0	0.3	0.4	*1.5*	*0.2*	*0.2*	*0.8*	*1.4*	*0.1*	*0.2*	*0.6*	18.7	6.6	3.6	1.9	*2.7*	*2.3*

Sources: EUROSTAT, DG XVII

OIL AND NATURAL GAS: SUPPLY AND DISPOSAL (MTOE)

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. OIL																		
A. 1. Supply																		
Primary Production	31.9	29.0	31.4	33.0	*32.1*	*29.6*	*32.2*	*33.1*	*32.2*	*29.7*	*32.4*	*33.4*	116.3	117.1	120.4	125.2	*127.0*	*127.6*
Crude	31.1	28.4	30.7	32.3	*31.2*	*29.0*	*31.7*	*32.3*	*31.3*	*29.1*	*31.9*	*32.5*	113.9	114.6	117.7	122.5	*124.2*	*124.8*
Oil Products	0.8	0.5	0.7	0.7	*0.9*	*0.6*	*0.5*	*0.8*	*0.9*	*0.6*	*0.5*	*0.8*	2.3	2.5	2.7	2.7	*2.7*	*2.8*
Net Imports	110.5	108.1	107.8	107.8	*107.0*	*108.0*	*108.4*	*110.7*	*109.4*	*111.1*	*114.0*	*113.7*	426.0	441.8	449.8	434.2	*434.1*	*448.2*
Bunkers	7.1	7.8	8.4	8.7	*7.9*	*8.3*	*8.6*	*8.1*	*8.0*	*8.4*	*8.6*	*8.2*	33.0	32.6	32.6	32.1	*32.9*	*33.2*
Gross Inland Consumption	139.1	128.1	125.8	136.0	*132.4*	*126.7*	*130.9*	*139.5*	*135.3*	*130.0*	*134.4*	*139.0*	510.2	525.2	535.0	529.0	*529.5*	*538.7*
Growth rate from previous period in %		-7.9	-1.8	8.1	*-2.7*	*-4.3*	*3.4*	*6.5*	*-3.0*	*-4.0*	*3.43.5*			2.9	1.9	-1.1	*0.1*	*1.7*
Transformation Energy Cons.	25.5	21.0	15.8	17.4	*17.6*	*17.5*	*16.7*	*21.1*	*18.2*	*17.6*	*16.5*	*17.0*	62.4	69.2	60.2	79.7	*73.0*	*69.2*
Refineries Input	135.0	135.5	140.3	139.1	*135.1*	*135.9*	*142.9*	*145.8*	*135.5*	*137.5*	*145.0*	*143.5*	515.8	529.9	549.4	549.9	*559.7*	*561.5*
Refineries Net Output	123.1	126.2	136.4	132.7	*130.8*	*129.4*	*138.0*	*138.0*	*131.2*	*130.9*	*140.0*	*139.4*	495.0	505.2	535.3	518.3	*536.2*	*541.5*
Refineries Efficiency in %	91.2	93.2	97.2	95.4	*96.8*	*95.2*	*96.6*	*94.6*	*96.8*	*95.2*	*96.6*	*97.1*	96.0	95.4	97.4	94.2	*95.8*	*96.4*
Power Generation Input	13.6	11.7	11.9	10.9	*13.3*	*11.0*	*11.8*	*13.3*	*13.8*	*11.0*	*11.5*	*12.8*	41.6	44.5	46.1	48.2	*49.4*	*49.1*
Growth rate from previous period in %		-14.0	1.1	-7.6	*21.8*	*-17.4*	*6.7*	*13.0*	*4.2*	*-20.6*	*4.6*	*11.6*		6.9	3.7	4.4	*2.6*	*-0.5*
A. 2. Inland Deliveries																		
TOTAL	113.6	107.1	110.0	118.6	*114.7*	*109.1*	*114.3*	*118.4*	*117.2*	*112.4*	*117.9*	*122.1*	447.7	456.0	474.8	449.3	*456.5*	*469.5*
Growth rate from previous period in %		-5.7	2.7	7.8	*-3.3*	*-4.9*	*4.7*	*3.6*	*-1.0*	*-4.1*	*4.9*	*3.5*		1.8	4.1	-5.4	*1.6*	*2.8*
Motor Gasoline	27.2	29.6	30.8	28.3	*27.5*	*29.7*	*31.1*	*29.4*	*28.0*	*30.6*	*32.0*	*30.2*	116.7	113.7	116.2	115.9	*117.7*	*120.9*
Growth rate from previous period in %		8.7	4.3	-8.1	*-2.9*	*8.1*	*4.7*	*-5.6*	*-4.6*	*9.0*	*4.8*	*-5.5*		-2.6	2.2	-0.3	*1.6*	*2.6*
Kerosene	7.0	7.9	9.0	7.6	*7.3*	*7.9*	*8.9*	*7.8*	*7.5*	*8.1*	*9.3*	*8.1*	29.8	30.3	31.4	31.4	*31.9*	*33.0*
Growth rate from previous period in %		13.0	14.0	-14.7	*-4.4*	*7.6*	*13.7*	*-12.3*	*-4.1*	*7.9*	*14.0*	*-12.1*		1.6	3.6	0.1	*1.7*	*3.4*
Gas/Diesel Oil-Total	50.9	43.8	46.4	52.9	*51.8*	*44.9*	*46.9*	*52.3*	*53.2*	*46.2*	*48.2*	*53.7*	179.2	191.2	192.7	194.0	*195.9*	*201.3*
Growth rate from previous period in %		-13.9	5.9	14.1	*-2.1*	*-13.3*	*4.3*	*11.6*	*1.8*	*-13.1*	*4.3*	*11.3*		6.7	0.8	0.7	*1.0*	*2.8*
Autom. Diesel	23.2	24.3	24.6	26.0	*23.7*	*25.0*	*25.4*	*26.3*	*24.6*	*26.1*	*26.5*	*27.6*	90.1	93.5	96.3	98.1	*100.5*	*104.8*
Growth rate from previous period in %		4.8	1.1	6.0	*-9.0*	*5.7*	*1.5*	*3.7*	*-6.6*	*6.2*	*1.6*	*3.8*		3.8	3.1	1.8	*2.4*	*4.3*
Heating Gas Oil	27.7	19.5	21.8	26.9	*28.1*	*19.9*	*21.4*	*26.0*	*28.6*	*20.1*	*21.7*	*26.1*	89.1	97.7	96.3	95.9	*95.5*	*96.5*
Growth rate from previous period in %		-29.6	11.9	23.2	4.7	*-29.3*	*7.8*	*21.1*	*10.3*	*-29.7*	*7.7*	*20.4*		9.7	-1.4	-0.5	*-0.5*	*1.1*
Heavy Fuel Oil	6.7	5.5	6.8	8.0	*7.0*	*6.9*	*6.3*	*7.8*	*7.2*	*7.0*	*6.4*	*7.8*	36.2	34.8	34.2	27.0	*28.0*	*28.4*
Growth rate from previous period in %		-17.8	22.6	18.3	*-12.5*	*-1.7*	*-8.3*	*23.2*	*-6.8*	*-3.9*	*-7.4*	*20.3*		-3.7	-1.9	-21.0	*3.6*	*1.5*
Other Products	21.8	20.4	17.1	21.7	*21.1*	*19.7*	*21.0*	*21.1*	*21.1*	*20.5*	*22.0*	*22.3*	85.8	85.9	100.4	81.1	*82.9*	*85.8*
Growth rate from previous period in %		-6.8	-16.0	27.1	*-2.9*	*-6.7*	*6.8*	*0.1*	*0.3*	*-3.1*	*7.2*	*1.4*		0.1	16.8	-19.2	*2.3*	*3.5*

OIL AND NATURAL GAS: SUPPLY AND DISPOSAL (MTOE) - CONTINUED

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
A. 3. Total Oil Stocks																		
Stocks at the end of period	133.4	134.6	139.5	135.6	*134.3*	*136.9*	*138.0*	*134.3*	*132.6*	*135.0*	*138.3*	*138.2*	133.6	134.7	137.2	135.6	*134.3*	*138.2*
Days of consumption (*)	95	97	102	99	*98*	*100*	*100*	*97*	*95*	*96*	*98*	*97*	101	101	96	98	*99*	*97*
B. NATURAL GAS																		
Primary Production	51.5	30.3	24.2	50.3	*53.6*	*32.8*	*25.2*	*48.3*	*54.8*	*33.2*	*25.7*	*49.6*	131.6	144.5	145.5	156.3	*160.0*	*163.3*
Net Imports	23.7	22.5	20.1	22.4	*25.1*	*25.8*	*22.1*	*24.7*	*25.6*	*26.3*	*22.5*	*24.9*	85.2	87.2	88.4	88.7	*97.7*	*99.3*
Gross Inland consumption	83.0	46.0	37.8	76.1	*86.4*	*52.8*	*40.0*	*77.9*	*92.0*	*56.2*	*42.8*	*81.8*	214.3	231.6	229.7	242.8	*257.1*	*272.8*
Growth rate from previous period in %		-44.6	-17.9	101.7	*13.5*	*-38.9*	*-24.2*	*94.5*	*18.1*	*-39.0*	*-23.8*	*91.3*		8.1	-0.9	5.7	*5.9*	*6.1*
Power Generation	7.2	7.4	7.3	8.0	*8.1*	*8.1*	*8.0*	*8.8*	*9.6*	*9.9*	*9.7*	*10.7*	28.4	31.1	28.8	29.9	*33.0*	*40.0*
Growth rate from previous period in %		2.5	-2.1	10.7	*0.2*	*0.6*	*-1.0*	*9.9*	*9.1*	*3.5*	*-2.2*	*10.0*		9.6	-7.6	4.1	*10.1*	*21.3*
Available for Final Consumption	75.7	38.6	30.5	68.1	*78.3*	*44.7*	*32.0*	*69.1*	*82.4*	*46.2*	*33.1*	*71.1*	185.9	200.5	200.9	212.9	*224.1*	*232.8*
Growth rate from previous period in %		-49.1	-21.0	123.4	*15.0*	*-42.9*	*-28.4*	*115.7*	*19.3*	*-43.9*	*-28.5*	*115.3*		7.9	0.2	6.0	*5.3*	*3.9*

(*) Number of days of consumption in the previous 365 days, ensured by stock level.

Sources: EUROSTAT, DG XVII

SUMMARY ENERGY BALANCE (MTOE)

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	*1Q94*	*2Q94*	*3Q94*	*4Q94*	*1Q95*	*2Q95*	*3Q95*	*4Q95*	1990	1991	1992	1993	*1994*	*1995*
Production																		
Solid Fuels	41.9	37.4	36.3	38.1	*39.2*	*35.2*	*32.8*	*33.8*	*36.6*	*33.3*	*31.1*	*32.3*	209.3	188.9	174.2	153.6	*141.0*	*133.4*
Hard Coal	25.7	23.6	22.6	23.1	*23.1*	*20.8*	*19.4*	*19.5*	*20.6*	*18.9*	*17.7*	*17.9*	121.4	117.7	111.0	95.1	*82.8*	*75.1*
Lignite	16.1	13.6	13.6	14.8	*16.0*	*14.3*	*13.3*	*14.2*	*15.9*	*14.3*	*13.4*	*14.3*	87.3	70.8	62.8	58.2	*57.8*	*57.9*
Oil	31.9	29.0	31.4	33.0	*32.1*	*29.6*	*32.2*	*33.1*	*32.2*	*29.7*	*32.4*	*33.4*	116.3	117.1	120.4	125.2	*127.0*	*127.6*
Natural Gas	51.5	30.3	24.2	50.3	*53.6*	*32.8*	*25.2*	*48.3*	*54.8*	*33.2*	*25.7*	*49.6*	131.6	144.5	145.5	156.3	*160.0*	*163.3*
Heat	49.5	40.9	40.2	46.6	*49.7*	*42.3*	*40.9*	*47.7*	*50.1*	*42.7*	*42.2*	*49.5*	160.9	163.1	169.1	177.2	*180.6*	*184.5*
Nuclear	48.9	40.3	39.6	45.9	*49.1*	*41.6*	*40.3*	*47.0*	*49.5*	*42.0*	*41.6*	48.9	158.6	160.8	166.7	174.7	*178.1*	*182.0*
Geothermy	0.6	0.6	0.6	0.6	*0.6*	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*	*0.6*	0.7	2.3	2.3	2.4	2.5	*2.5*	*2.6*
Primary Electricity	2.8	3.8	3.3	4.3	*3.9*	*4.4*	*3.4*	*3.6*	*4.1*	*4.6*	*3.6*	3.8	12.5	13.8	13.9	14.2	*15.3*	*16.1*
Other	0.8	0.8	0.8	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	0.8	3.0	3.3	3.1	3.1	*3.2*	*3.1*
TOTAL	178.0	141.8	135.9	172.4	*178.8*	*144.7*	*134.9*	*166.9*	*178.2*	*143.9*	*135.5*	169.0	629.7	628.0	624.6	628.1	*625.4*	*626.7*
Net Imports																		
Solid Fuels	19.1	19.2	18.4	19.1	*17.8*	*18.0*	*18.5*	*19.1*	*18.5*	*18.5*	*18.9*	19.7	78.1	87.5	90.9	75.8	*73.4*	*75.6*
Hard Coal	18.8	19.0	18.1	18.8	*17.7*	*17.9*	*18.5*	*19.1*	*18.4*	*18.5*	*18.9*	19.7	78.0	86.3	89.4	74.7	*73.2*	*75.5*
Oil	110.5	108.1	107.8	107.8	*107.0*	*108.0*	*108.4*	*110.7*	*109.4*	*111.1*	*114.0*	113.7	426.0	441.8	449.8	434.2	*434.1*	*448.2*
Crude Oil	105.2	107.8	107.7	106.9	*104.5*	*106.5*	*112.0*	*112.5*	*104.8*	*108.1*	*113.9*	109.8	403.5	413.1	436.5	427.6	*435.5*	*436.6*
Petroleum products	5.2	0.3	0.2	0.9	*2.5*	*1.4*	*-3.5*	*-1.8*	*4.6*	*3.0*	*0.0*	3.9	22.4	28.6	13.3	6.6	*-1.3*	*11.6*
Natural Gas	23.7	22.5	20.1	22.4	*25.1*	*25.8*	*22.1*	*24.7*	*25.6*	*26.3*	*22.5*	24.9	85.2	87.2	88.4	88.7	*97.7*	*99.3*
Electricity	0.2	0.8	0.6	0.0	*0.2*	*0.6*	*0.6*	*0.2*	*0.3*	*0.6*	*0.5*	0.1	1.6	0.6	1.0	1.6	*1.6*	*1.4*
TOTAL	153.5	150.6	146.9	149.3	*150.1*	*152.3*	*149.6*	*154.8*	*153.8*	*156.5*	*155.8*	158.5	590.9	617.2	630.0	600.3	*606.8*	*624.5*
Bunkers																		
Petroleum Products	7.1	7.8	8.4	8.7	*7.9*	*8.3*	*8.6*	*8.1*	*8.0*	*8.4*	*8.6*	8.2	33.0	32.6	32.6	32.1	*32.9*	*33.2*

SUMMARY ENERGY BALANCE (MTOE) - CONTINUED

	Quarter												Year					
	1Q93	2Q93	3Q93	4Q93	*1Q94*	*2Q94*	*3Q94*	*4Q94*	*1Q95*	*2Q95*	*3Q95*	*4Q95*	1990	1991	1992	1993	*1994*	*1995*
Gross Inland Consumption																		
Solid Fuels	60.2	56.8	54.6	60.0	*61.4*	*52.6*	*51.0*	*60.3*	*60.9*	*50.8*	*49.8*	59.8	291.0	274.1	256.2	231.6	*225.2*	*221.3*
Hard Coal	44.0	43.3	41.0	45.1	*45.0*	*38.1*	*37.2*	*44.9*	*44.6*	*36.4*	*35.9*	44.5	201.6	201.9	192.7	173.3	*165.2*	*161.3*
Coke	-0.3	-0.2	-0.1	0.0	*0.2*	*0.2*	*0.0*	*0.1*	*0.2*	*0.2*	*0.1*	0.2	0.7	1.1	-0.2	-0.7	*0.4*	*0.7*
Lignite	16.6	13.8	13.8	15.1	*16.2*	*14.4*	*13.8*	*15.5*	*16.2*	*14.3*	*13.9*	15.3	88.9	71.6	64.0	59.3	*59.9*	*59.6*
Oil	139.1	128.1	125.8	136.0	*132.4*	*126.7*	*130.9*	*139.5*	*135.3*	*130.0*	*134.4*	139.0	510.2	525.2	535.0	529.0	*529.5*	*538.7*
Crude Oil	135.2	135.7	139.7	139.0	*135.1*	*135.9*	*142.9*	*145.8*	*135.5*	*137.5*	*145.0*	143.5	515.8	529.9	549.4	549.5	*559.7*	*561.5*
Petroleum products	3.9	-7.6	-13.8	-2.9	*-2.7*	*-9.2*	*-12.0*	*-6.3*	*-0.2*	*-7.6*	*-10.6*	-4.5	-5.7	-4.7	-14.3	-20.5	*-30.3*	*-22.8*
Natural Gas	83.0	46.0	37.8	76.1	*86.4*	*52.8*	*40.0*	*77.9*	*92.0*	*56.2*	*42.8*	81.8	214.3	231.6	229.7	242.8	*257.1*	*272.8*
Heat	49.5	40.9	40.2	46.6	*49.7*	*42.3*	*40.9*	*47.7*	*50.1*	*42.7*	*42.2*	49.5	160.9	163.1	169.1	177.2	*180.6*	*184.5*
Nuclear	48.9	40.3	39.6	45.9	*49.1*	*41.6*	*40.3*	*47.0*	*49.5*	*42.0*	*41.6*	48.9	158.6	160.8	166.7	174.7	*178.1*	*182.0*
Geothermy	0.6	0.6	0.6	0.6	*0.6*	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*	*0.6*	0.7	2.3	2.3	2.4	2.5	*2.5*	*2.6*
Primary Electricity	3.1	4.6	3.9	4.3	*4.0*	*5.0*	*4.0*	*3.9*	*4.3*	*5.2*	*4.1*	4.0	14.1	14.4	14.9	15.8	*16.9*	*17.6*
Other	0.8	0.8	0.8	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	0.8	3.0	3.3	3.1	3.1	*3.2*	*3.1*
TOTAL	335.6	277.1	263.1	323.8	*334.7*	*280.2*	*267.6*	*330.1*	*343.5*	*285.5*	*274.0*	335.0	1193.5	1211.7	1208.0	1199.6	*1212.6*	*1238.0*
Import Dependency (%)																		
Hard Coal	42.7	44.0	44.1	41.8	*39.3*	*47.0*	*49.7*	*42.5*	*41.4*	*50.8*	*52.6*	44.2	38.7	42.7	46.4	43.1	*44.3*	*46.8*
Oil	75.6	79.6	80.3	*74.5*	*76.3*	*80.0*	*77.7*	*75.0*	*76.4*	*80.3*	*79.7*	77.2	83.5	84.1	84.1	82.1	*82.0*	*83.2*
Natural Gas	28.5	48.9	53.3	*29.4*	*29.1*	*48.9*	*55.2*	*31.7*	*27.8*	*46.8*	*52.7*	30.4	39.8	37.6	38.5	36.5	*38.0*	*36.4*
TOTAL	45.7	54.3	55.8	46.1	*44.8*	*54.4*	*55.9*	*46.9*	*44.8*	*54.8*	*56.9*	47.3	49.5	50.9	52.2	50.0	*50.0*	*50.4*
Deliveries to Final consumers																		
Solid Fuels	13.3	14.9	13.2	17.3	*16.3*	*15.2*	*13.9*	*15.5*	*15.6*	*13.5*	*12.9*	15.4	108.6	82.6	71.3	58.7	*60.9*	*57.5*
Oil	113.6	107.1	110.0	118.6	*114.7*	*109.1*	*114.3*	*118.4*	*117.2*	*112.4*	*117.9*	122.1	447.7	456.0	474.8	449.3	*456.5*	*469.5*
Natural Gas	75.7	38.6	30.5	68.1	78.3	*44.7*	*32.0*	*69.1*	*82.4*	*46.2*	*33.1*	71.1	185.9	200.5	200.9	212.9	*224.1*	*232.8*
Derived Gas	3.2	3.0	3.0	3.0	*2.8*	*2.7*	*2.8*	*2.8*	*2.5*	*2.4*	*2.5*	2.5	18.0	16.0	14.1	12.2	*11.0*	*9.9*
Electricity	43.8	37.5	36.5	*42.7*	*44.3*	*38.8*	*37.1*	*43.3*	*45.6*	*39.7*	*38.1*	44.4	154.7	158.0	159.5	160.6	*163.5*	*167.8*
TOTAL	249.6	201.1	193.2	249.8	*256.4*	*210.5*	*200.1*	*249.1*	*263.2*	*214.2*	*204.5*	255.6	914.9	913.1	920.6	893.7	*916.1*	*937.5*

Sources: EUROSTAT, DG XVII

ELECTRICITY: SUMMARY BALANCE

	Quarter												Year					
	11Q93	2Q93	3Q93	4Q93	*1Q94*	*2Q94*	*3Q94*	*4Q94*	*1Q95*	*2Q95*	*3Q95*	*4Q95*	1990	1991	1992	1993	*1994*	*1995*
A.1.Generation (TWh)																		
Total Gross Generation	542.3	457.8	447.5	532.2	*548.1*	*473.8*	*454.9*	*536.0*	*562.9*	*485.9*	*467.9*	*550.6*	1906.6	1961.2	1978.4	1979.8	*2012.9*	*2067.3*
Growth rate from previous period in %		-15.6	-2.2	18.9	*3.0*	*-13.6*	*-4.0*	*17.8*	*5.0*	*-13.7*	*-3.7*	*17.7*		2.9	0.9	0.1	*1.7*	*2.7*
Produced by Pumping	3.3	3.7	3.7	3.1	*3.0*	*3.1*	*3.1*	*3.2*	*3.1*	*3.1*	*3.1*	*3.2*	13.8	14.8	16.3	13.8	*12.4*	*12.6*
Primary Production (Hydro)	33.0	44.7	38.2	49.7	*45.0*	*51.3*	*39.7*	*42.4*	*47.3*	*53.7*	*42.0*	*44.7*	144.9	160.3	161.7	165.6	*178.4*	*187.7*
Growth rate from previous period in %		35.5	-14.6	30.3	*-9.6*	*14.2*	*-22.6*	*6.7*	*11.6*	*13.5*	*-21.7*	*6.4*		10.6	0.9	2.4	*7.7*	*5.2*
Derived:	506.0	409.3	405.7	479.4	*500.2*	*419.4*	*412.1*	*490.4*	*512.5*	*429.2*	*422.8*	*502.6*	1747.9	1786.1	1800.4	1800.4	*1822.1*	*1867.1*
Nuclear	196.6	162.8	163.5	189.3	*200.3*	*169.7*	*164.1*	*192.3*	*202.6*	*171.8*	*170.2*	*200.3*	632.8	651.1	678.8	712.3	*726.4*	*744.9*
Growth rate from previous period in %		-17.2	0.4	15.8	*5.8*	*-15.3*	*-3.3*	*17.1*	*5.4*	*-15.2*	*-0.9*	*17.7*		2.9	4.3	4.9	*2.0*	*2.5*
Conventional Thermal	308.5	245.6	241.3	289.2	*299.0*	*248.8*	*247.1*	*297.2*	*309.0*	*256.5*	*251.7*	*301.3*	1111.9	1131.8	1118.1	1084.6	*1092.1*	*1118.6*
Growth rate from previous period in %		-20.4	-1.8	19.8	*3.4*	*-16.8*	*-0.7*	*20.3*	*4.0*	*-17.0*	*-1.9*	*19.7*		1.8	-1.2	-3.0	*0.7*	*2.4*
Geothermal	0.9	0.9	0.9	0.9	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*	*1.0*	3.2	3.2	3.5	3.6	*3.6*	*3.7*
Absorbed by Pumping	4.6	5.3	5.2	4.4	*4.3*	*4.3*	*4.4*	*4.6*	*4.4*	*4.4*	*4.3*	*4.5*	19.4	21.2	23.1	19.5	*17.5*	*17.6*
Own consumption	30.7	25.5	24.9	30.7	*30.9*	*26.0*	*25.5*	*30.3*	*31.6*	*26.7*	*26.1*	*31.0*	107.2	110.2	113.0	111.8	*112.6*	*115.5*
Total Net Generation	511.6	432.3	422.6	501.5	*517.3*	*447.8*	*429.4*	*505.8*	*531.2*	*459.3*	*441.8*	*519.6*	1799.4	1851.0	1865.4	1868.0	*1900.3*	*1951.9*
Growth rate from previous period in %		-15.5	-2.2	18.7	*3.1*	*-13.4*	*-4.1*	*17.8*	*5.0*	*-13.6*	*-3.8*	*17.6*		2.9	0.8	0.1	*1.7*	*2.7*
A.2.Disposal (TWh)																		
Total Net Generation	506.9	427.0	417.4	497.1	*513.0*	*443.5*	*425.1*	*501.2*	*526.9*	*454.9*	*437.4*	*515.1*	1780.0	1829.8	1842.3	1848.4	*1882.8*	*1934.3*
Net Imports	2.8	8.8	7.3	-0.2	*1.8*	*7.2*	*6.9*	*2.8*	*3.0*	*6.6*	*5.7*	*1.2*	18.7	7.4	12.0	18.7	*18.7*	*16.5*
Total Available	509.7	435.8	424.7	496.9	*514.8*	*450.6*	*432.0*	*504.0*	*529.9*	*461.5*	*443.1*	*516.3*	1798.7	1837.2	1854.3	1867.1	*1901.5*	*1950.8*
Growth rate from previous period in %		-14.5	-2.5	17.0	*3.6*	*-12.5*	*-4.1*	*16.7*	*5.1*	*-12.9*	*-4.0*	*16.5*		2.1	0.9	0.7	*1.8*	*2.6*
Distribution Losses	33.8	29.0	28.2	32.9	*34.1*	*29.9*	*28.7*	*33.4*	*35.1*	*30.6*	*29.4*	*34.2*	119.5	122.1	123.3	124.0	*126.1*	*129.3*
Consumption Int. Market	475.9	406.8	396.4	464.0	*480.7*	*420.7*	*403.3*	*470.6*	*494.8*	*430.9*	*413.7*	*482.1*	1679.3	1715.1	1730.9	1743.2	*1775.4*	*1821.5*
Energy Branch consumption	16.3	13.9	13.6	15.9	*16.5*	*14.4*	*13.8*	*16.1*	*17.0*	*14.8*	*14.2*	*16.5*	57.6	58.8	59.3	59.7	*60.8*	*62.4*
Available for Final consumption	459.6	392.8	382.9	448.1	*464.3*	*406.3*	*389.5*	*454.5*	*477.8*	*416.1*	*399.6*	*465.6*	1621.7	1656.4	1671.6	1683.4	*1714.6*	*1759.1*
Growth rate from previous period in %		-14.5	-2.5	17.0	*3.6*	*-12.5*	*-4.1*	*16.7*	*5.1*	*-12.9*	*-4.0*	*16.5*		2.1	0.9	0.7	*1.9*	*2.6*

ELECTRICITY: SUMMARY BALANCE - CONTINUED

Quarter	11Q93	2Q93	3Q93	4Q93	1Q94	2Q94	3Q94	4Q94	1Q95	2Q95	3Q95	4Q95	1990	1991	1992	1993	1994	1995
								Year										
B. INPUT TO CONVENTIONAL THERMAL POWER STATIONS (Mtoe)																		
Solids	48.4	37.0	35.9	40.7	*43.1*	*35.3*	*34.6*	*42.0*	*43.4*	*35.3*	*34.4*	*41.6*	171.3	179.5	173.9	162.0	*155.0*	*154.7*
Hard Coal	35.0	25.2	24.0	27.9	*30.2*	*23.3*	*22.6*	*29.2*	*30.5*	*23.3*	*22.3*	*28.8*	122.5	127.1	121.7	112.1	*105.3*	*104.9*
Growth rate from previous period in %		-27.9	-5.0	16.2	*8.2*	*-22.6*	*-3.3*	*29.3*	*4.3*	*-23.4*	*-4.3*	*28.9*		3.7	-4.2	-7.9	*-6.1*	*-0.3*
Lignite	13.4	11.8	11.9	12.8	*12.9*	*12.0*	*12.0*	*12.8*	*12.9*	*12.0*	*12.0*	*12.9*	48.8	52.5	52.2	49.9	*49.7*	*49.8*
Growth rate from previous period in %		-11.9	1.0	7.9	*0.4*	*-7.2*	*0.3*	*6.7*	*0.7*	*-7.0*	*0.4*	*6.7*		7.6	-0.5	-4.4	*-0.5*	*0.2*
Oil	13.6	11.7	11.9	10.9	*13.3*	*11.0*	*11.8*	*13.3*	*13.8*	*11.0*	*11.5*	*12.8*	41.6	44.5	46.1	48.2	*49.4*	*49.1*
Growth rate from previous period in %		-14.0	1.1	-7.6	*21.8*	*-17.4*	*6.7*	*13.0*	*4.2*	*-20.6*	*4.6*	*11.6*		6.9	3.7	4.4	*2.6*	*-0.5*
Gas	8.7	9.0	8.8	9.5	*9.5*	*9.6*	*9.5*	*10.3*	*11.1*	*11.5*	*11.3*	*12.2*	34.4	37.0	34.6	36.0	*38.9*	*46.1*
Natural Gas	7.2	7.4	7.3	8.0	*8.1*	*8.1*	*8.0*	*8.8*	*9.6*	*9.9*	*9.7*	*10.7*	28.4	31.1	28.8	29.9	*33.0*	*40.0*
Growth rate from previous period in %		2.5	-2.1	10.7	*0.2*	*0.6*	*-1.0*	*9.9*	*9.1*	*3.5*	*-2.2*	*10.0*		9.6	-7.6	4.1	*10.1*	*21.3*
Derived Gas	1.5	1.5	1.6	1.5	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	6.0	5.8	5.8	6.1	*5.9*	*6.1*
Growth rate from previous period in %		2.4	1.2	-5.8	*-0.2*	*1.1*	*1.9*	*-1.3*	*0.4*	*1.5*	*2.3*	*-0.9*		-2.4	-0.3	4.1	*-2.1*	*2.7*
Other (*)	0.8	0.8	0.8	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	3.0	3.3	3.1	3.1	*3.2*	*3.1*
Growth rate from previous period in %		0.0	0.0	0.0	*1.5*	*0.0*	*0.0*	*0.0*	*-1.8*	*0.0*	*0.0*	*0.0*		10.7	-8.6	2.3	*1.5*	*-1.8*
Geothermal	0.6	0.6	0.6	0.6	*0.6*	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*	*0.6*	*0.7*	2.3	2.3	2.4	2.5	*2.5*	*2.6*
Growth rate from previous period in %		-3.5	0.0	3.5	*-4.2*	*3.6*	*-2.2*	*7.8*	*-6.5*	*4.2*	*-2.6*	*8.3*		-0.7	7.8	2.3	*0.8*	*2.5*
TOTAL	75.0	62.9	61.2	66.9	*67.3*	*57.3*	*57.3*	*67.0*	*69.7*	*59.2*	*58.6*	*68.2*	265.1	280.4	274.0	266.1	*248.9*	*255.7*
Growth rate from previous period in %		-16.1	-2.7	9.2	*0.7*	*-14.8*	*-0.1*	*17.1*	*4.0*	*-15.0*	*-1.1*	*16.4*		5.8	-2.3	-2.9	*-6.4*	*2.7*
C. HEAT (Mtoe)																		
Nuclear Production	48.9	40.3	39.6	45.9	*49.1*	*41.6*	*40.3*	*47.0*	*49.5*	*42.0*	*41.6*	*48.9*	158.6	160.8	166.7	174.7	*178.1*	*182.0*
Geothermal Production	0.6	0.6	0.6	0.6	*0.6*	*0.6*	*0.6*	*0.7*	*0.6*	*0.6*	*0.6*	*0.7*	2.3	2.3	2.4	2.5	*2.5*	*2.6*
TOTAL	49.5	40.9	40.2	46.6	*49.7*	*42.3*	*40.9*	*47.7*	*50.1*	*42.7*	*42.2*	*49.5*	160.9	163.1	169.1	177.2	*180.6*	*184.5*
Nuclear Capacity (GW)	107.9	107.9	107.9	107.9	*107.6*	*107.1*	*107.1*	*107.1*	*107.2*	*107.2*	*107.2*	*108.6*	104.0	105.1	106.7	107.9	*107.2*	*107.5*

(*) Industrial and urban wastes
Sources: EUROSTAT, DG XVII

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DG II	Directorate-General for Economic Affairs of the European Commission
DG XVII	Directorate-General for Energy of the European Commission
EFTA	European Free Trade Agreement
Energy Intensity	Ratio of GIC to GDP
EU	European Union
GCC	Gulf Co-operation Council
GDP	Gross Domestic Product
GIC	Gross Inland Consumption
GDR	German Democratic Republic
GW	GigaWatt, or 10^9 Watt
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IMF	International Monetary Fund
l	Litre
kl	Thousand litre
kWh	Thousand Watt.hour
MECU	Million ECU
Mt	Million metric tonne
Mtoe	Million toe
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Co-operation and Development
OLADE	Organizacion Latinoamericana de Energia
S	Sulphur
SOEC	Statistical Office of the European Commission
STEO	Short-Term Energy Outlook for the European Union
t	Metric tonne, or 1000 kilograms
toe	Tonne of oil equivalent, or 10^7 kilo calories, or 41.86 GJ
TWh	Tera Watt.hour, or 10^{12} Watt.hour
UN	United Nations
UN-ECE	UN's Economic Commission for Europe
WB	World Bank

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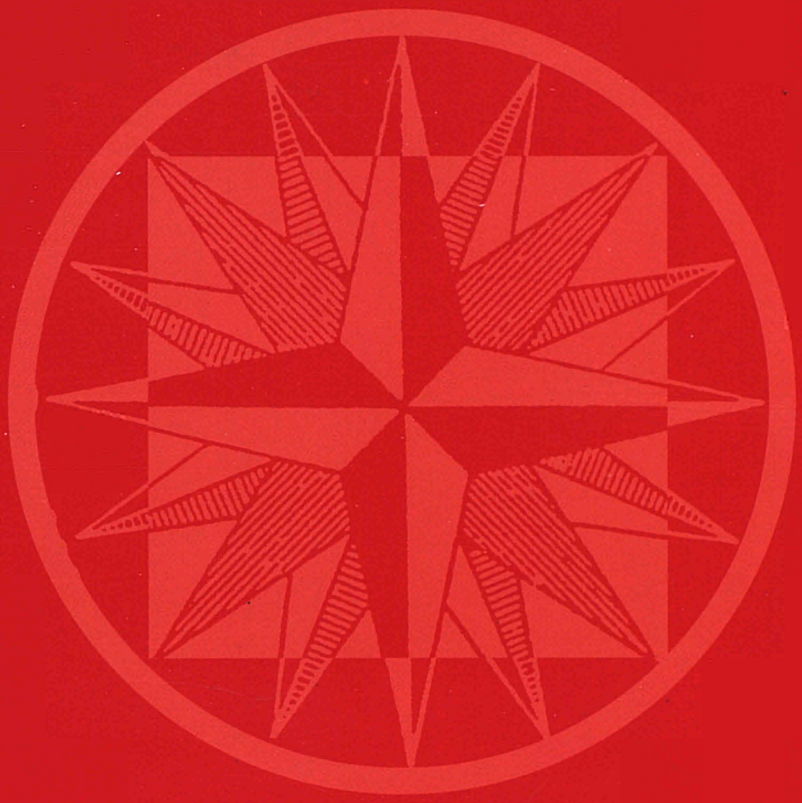

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