FACTS AND FIGURES is produced annually at the OPEC Secretariat in Vienna, to assist people requiring a means of rapidly assimilating important facts about the energy industry, without themselves having to delve into time-consuming research from an array of sources. Since it is the belief of OPEC Member Countries that energy cannot be viewed in isolation from other global economic considerations, parts of this booklet broach such related issues as comparisons between the economic fortunes of industrialized and developing nations.

A wide range of authoritative sources have been consulted in producing this booklet. Where disparities have occurred among sources, great pains have been taken at the Secretariat to distill those figures which most faithfully reflect observed market trends.

The graphs are presented in six sections. The first three examine energy issues on a global scale, the next two concentrate on OPEC, while the final one makes broad economic comparisons between different world groupings.

It is hoped that this latest issue of FACTS AND FIGURES, which covers the period up to the end of 1986, will prove of interest and value to its readers.

November 1987
OPEC flows of crude and refined oil — 1986

- OPEC Far East: 4 Indonesia
- OPEC Latin America: 2 Ecuador; 13 Venezuela
- OPEC Africa: 1 Algeria; 3 Gabon; 9 Nigeria; 8 SP Libyan AJ
- OPEC Middle East: 5 IR Iran; 6 Iraq; 7 Kuwait; 10 Qatar; 11 Saudi Arabia; 12 UAE
facts & figures

World primary energy trends 1-5

Sections

1
2
3
4
5
6
Glossary

Aus/NZ  Australia/New Zealand
b/d  Barrels per day
billion  Thousand million
bboe  Billion barrels oil equivalent
CPE  Centrally planned economy
DC  Developing country
don  US dollar
dwt  Deadweight tons
EEC  European Economic Community
GDP  Gross domestic product
GNP  Gross national product
IAEA  International Atomic Energy Agency
IR Iran  Islamic Republic of Iran
mb/d  Million barrels per day
mtoe  Million tons oil equivalent
North  Industrialized countries
OECD  Organization for Economic Co-operation and Development
OPEC  Organization of the Petroleum Exporting Countries
South  Developing countries
SP Libyan AJ  Socialist Peoples Libyan Arab Jamahiriya
UAE  United Arab Emirates
US  United States of America
USSR  Union of Soviet Socialist Republics
W Eur  Western Europe

Sources

1 BP Statistical Review of World Energy
2 UN Energy Statistics Yearbook
3 Direct communications to the OPEC Secretariat
4 World Oil
5 Petroleum Intelligence Weekly
6 OPEC Secretariat calculations
7 Cedigaz
8 National sources
9 Middle East Economic Survey
10 Oil and Gas Journal
11 Hydrocarbon Processing
12 Arab Oil and Gas
13 Economic Intelligence Unit
14 World Tanker Fleet Review
15 France in the World, 1986
16 OPEC Annual Statistical Bulletin, 1986
17 20th Century Petroleum Statistics
18 Oil and Energy Trends, Statistical Review
19 Nuclear Power Reactors in the World, IAEA
20 OECD Quarterly Oil and Gas Statistics
21 OAPEC report
22 OECD Economic Outlook
23 International Petroleum Times
24 IMF International Financial Statistics
25 OECD Trade by Commodity
26 GATT, International Trade, 1985-86
27 UN Monthly Bulletin of Statistics
28 OECD press release, Financial Resources for Developing Countries, 19 June 1987
Primary energy consumption by type 1974–86 — flow chart

Primary energy consumption by type 1974–86 — selected years

Primary energy consumption by group 1974–86

Primary energy production by group 1974–86

Primary energy comparison between regions of the South 1986
World primary energy trends
1974 – 86

Primary energy consumption by type — flow chart
Billion barrels oil equivalent

- World totals (bboe) — 1974, 42.75; 1978, 48.60; 1982, 49.05; 1986, 54.41.
- The figures include bunkers.
- Sources: 1, 2.
## Primary energy consumption by type — selected years

Billion barrels oil equivalent

<table>
<thead>
<tr>
<th>Year</th>
<th>Oil</th>
<th>Gas</th>
<th>Coal</th>
<th>Hydro</th>
<th>Nuclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>20.9</td>
<td>11.3</td>
<td>7.6</td>
<td>0.4</td>
<td>2.5</td>
</tr>
<tr>
<td>1978</td>
<td>23.7</td>
<td>12.7</td>
<td>8.3</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>1982</td>
<td>21.6</td>
<td>13.7</td>
<td>8.8</td>
<td>3.3</td>
<td>1.5</td>
</tr>
<tr>
<td>1986</td>
<td>22.2</td>
<td>15.8</td>
<td>10.0</td>
<td>3.7</td>
<td>2.7</td>
</tr>
</tbody>
</table>

- The figures include bunkers.
- Sources: 1, 2.
## World primary energy trends

1974-86

### Primary energy consumption by group

#### Billion barrels oil equivalent

<table>
<thead>
<tr>
<th>Year</th>
<th>DCs</th>
<th>OECD</th>
<th>CPEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>16.54</td>
<td>17.54</td>
<td>25.65</td>
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<tr>
<td>1975</td>
<td>17.16</td>
<td>16.25</td>
<td>26.02</td>
</tr>
<tr>
<td>1976</td>
<td>17.60</td>
<td>17.54</td>
<td>27.60</td>
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<td>1977</td>
<td>18.65</td>
<td>17.54</td>
<td>27.25</td>
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<tr>
<td>1978</td>
<td>19.25</td>
<td>16.54</td>
<td>25.65</td>
</tr>
<tr>
<td>1979</td>
<td>20.16</td>
<td>17.54</td>
<td>25.65</td>
</tr>
<tr>
<td>1980</td>
<td>22.16</td>
<td>17.54</td>
<td>27.60</td>
</tr>
<tr>
<td>1981</td>
<td>22.65</td>
<td>17.54</td>
<td>27.60</td>
</tr>
<tr>
<td>1982</td>
<td>23.16</td>
<td>17.54</td>
<td>27.60</td>
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<tr>
<td>1983</td>
<td>22.65</td>
<td>17.54</td>
<td>27.60</td>
</tr>
<tr>
<td>1984</td>
<td>23.16</td>
<td>17.54</td>
<td>27.60</td>
</tr>
<tr>
<td>1985</td>
<td>23.65</td>
<td>17.54</td>
<td>27.60</td>
</tr>
<tr>
<td>1986</td>
<td>24.16</td>
<td>17.54</td>
<td>27.60</td>
</tr>
</tbody>
</table>

- The figures include bunkers.
- Sources: 1, 2.
Primary energy production by group

Billion barrels oil equivalent

- DCs
- OECD
- CPEs

1974: 11.86
1978: 14.97
1982: 13.74
1986: 14.99

Sources: 1, 2.
Primary energy comparison between regions of the South

Billion barrels oil equivalent

- **Latin America**
  - Consumption: 3.04
  - Production: 3.71

- **Middle East**
  - Consumption: 1.25
  - Production: 5.03

- **Africa**
  - Consumption: 1.48
  - Production: 2.99

- **Asia**
  - Consumption: 3.45
  - Production: 3.02

- **China**
  - Consumption: 4.13
  - Production: 4.46

The consumption figures include bunkers.
Asia excludes Japan and China.
Sources: 1, 2.
World oil and gas trends

- Crude oil production 1982-86
- Per capita oil consumption 1986
- Natural gas production 1986
- Oil and gas comparison 1986
- Refining capacity by group 1960-86 — flow chart
- Refining capacity by group 1960-86 — selected years
- Tanker fleet by flag 1981-86
Crude oil production

Million barrels per day

- North America
- Latin America
- Western Europe
- Middle East
- Africa
- Asia/Far East/Oceania
- CPEs


Sources: 3-5.
Per capita oil consumption
Barrels per person per year

The figures include bunkers.
Sources: 1, 6.
Natural gas production

Billion standard cubic metres

- North America: 122.0
- Latin America: 122.0
- Western Europe: 206.3
- Middle East: 130.4
- Africa: 143.9
- Asia/Tar East/Oceania: 126.7

World

- Gross
- Marketed
- Reinjected
- Flared
- Other

Sources: 3, 5, 7–9.
Oil and gas comparison

Percentage

- DCs
- OECD
- CPEs

The oil consumption figures include bunkers.

Source: 1.
Refining capacity by group — flow chart

Million barrels per day

- OPEC
- OECD
- CPEs
- Others

World totals (mb/d) — 1960, 24.4; 1970, 51.3; 1980, 82.4; 1986, 73.2.

Sources: 3, 5, 8–13.
Refining capacity by group — selected years

Million barrels per day

- OPEC
- OECD
- CPEs
- Others

Sources: 3, 5, 8-13.
World oil and gas trends

1981-86

Tanker fleet by flag

Million deadweight tons

- OECD
- CPEs
- OPEC
- Flags of convenience
- Others

Only crude and product tankers of 10,000 dwt and above are included in the figures.
The figures are as at the end of each year.
Source: 14.
World energy resources

Proven recoverable conventional energy resources 1986

Crude oil reserves 1986

Cumulative oil discoveries 1957–86

Number of active oil exploration rigs 1982–86

Proven natural gas reserves 1986

Nuclear power 1986

Proven recoverable coal reserves 1986
Proven recoverable conventional energy resources

Billion barrels oil equivalent

- Oil
- Gas
- Coal
- Uranium

OECD: 2,016
OPEC: 763
Others: 967

The figures exclude CPEs.
Sources: 1, 15, 16.
## Crude oil reserves

*Billion barrels*

<table>
<thead>
<tr>
<th>Country</th>
<th>Crude Oil Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>8.8</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1.4</td>
</tr>
<tr>
<td>Gabon</td>
<td>0.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>9.0</td>
</tr>
<tr>
<td>IR Iran</td>
<td>72.0</td>
</tr>
<tr>
<td>Iraq</td>
<td>94.5</td>
</tr>
<tr>
<td>Kuwait</td>
<td>92.9</td>
</tr>
<tr>
<td>SP Libyan AJ</td>
<td>22.8</td>
</tr>
<tr>
<td>Nigeria</td>
<td>16.0</td>
</tr>
<tr>
<td>Qatar</td>
<td>4.5</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>169.2</td>
</tr>
<tr>
<td>UAE</td>
<td>97.2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>55.5</td>
</tr>
</tbody>
</table>

- The figures are as at the end of the year.
- Sources: 3, 5, 6–10, 12, 13.
Cumulative oil discoveries

Billion barrels

- Cumulative production
- Net addition to reserves

- Cumulative discoveries = cumulative production + net addition to reserves.
- "World" includes OPEC Member Countries.
- Sources: 3-5, 8-10, 12, 13, 17.
Number of active oil exploration rigs

<table>
<thead>
<tr>
<th>Year</th>
<th>OPEC</th>
<th>Non-OPEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>4,124</td>
<td>442</td>
</tr>
<tr>
<td>1983</td>
<td>3,826</td>
<td>301</td>
</tr>
<tr>
<td>1984</td>
<td>3,862</td>
<td>288</td>
</tr>
<tr>
<td>1985</td>
<td>3,256</td>
<td>292</td>
</tr>
<tr>
<td>1986</td>
<td>2,073</td>
<td>190</td>
</tr>
</tbody>
</table>

Notes:
- The figures exclude CPEs.
- The figures are as at the end of each year.
- Source: 18.
## Proven natural gas reserves

### Billion standard cubic metres

<table>
<thead>
<tr>
<th>Region</th>
<th>Reserves (Billion SCm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>7,970</td>
</tr>
<tr>
<td>Latin America</td>
<td>6,581</td>
</tr>
<tr>
<td>Western Europe</td>
<td>5,589</td>
</tr>
<tr>
<td>Middle East</td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>7,039</td>
</tr>
<tr>
<td>Asia/Far East/Oceania</td>
<td>7,529</td>
</tr>
<tr>
<td>CPEs</td>
<td></td>
</tr>
<tr>
<td><strong>Regional total</strong></td>
<td><strong>7,970</strong></td>
</tr>
<tr>
<td><strong>OPEC</strong></td>
<td><strong>6,581</strong></td>
</tr>
<tr>
<td><strong>Non-OPEC</strong></td>
<td><strong>5,589</strong></td>
</tr>
<tr>
<td><strong>World</strong></td>
<td><strong>30,234</strong></td>
</tr>
</tbody>
</table>

- The figures are as at the end of the year.
- Sources: 3–5, 7–10, 13.
Nuclear power

- DCs
- CPEs
- Industrialized countries

In operation

No. of units 302
Megawatts 223,086

Under construction

No. of units 18
Megawatts 64,393

The figures are as at the end of the year.

Source: 19.
Proven recoverable coal reserves

Billion tons coal

- Bituminous coal and anthracite
- Sub-bituminous coal and lignite

- North America: 270.7
- Latin America: 70
- Western Europe: 95.4
- Middle East: negligible
- Africa: 65.9
- Asia/Far East/Oceania: 85.7
- World: 492.9

Source: 1.
SECTION

OPEC flows and volumes
Oil reserves-to-production

Life in years

This table indicates the expected life of known oil reserves during a given year, at that year's average depletion rate.

Sources: 3–5, 8–10, 12, 13.
Oil market share

Million barrels per day

- **Prodn** = crude oil production.
- **Export** = exports of crude oil and oil products.
- **Sources:** 2-5, 8, 20.
Crude oil production and exports

Million barrels per day

Sources: 2, 3, 6, 20.
Refined oil production, exports and consumption

Million barrels per day

- Production data exclude output from gas plants.
- Exports and consumption exclude bunkers.
- Sources: 2, 3, 8, 20, 21.
## Natural gas production

### Billion standard cubic metres

<table>
<thead>
<tr>
<th>Country</th>
<th>Production (Billion scm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>0.7</td>
</tr>
<tr>
<td>Ecuador</td>
<td>2.0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>12.9</td>
</tr>
<tr>
<td>IR Iran</td>
<td>18.7</td>
</tr>
<tr>
<td>Iraq</td>
<td>6.7</td>
</tr>
<tr>
<td>Kuwait</td>
<td>6.2</td>
</tr>
<tr>
<td>SP Libyan AJ</td>
<td>40.5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>23.6</td>
</tr>
<tr>
<td>Qatar</td>
<td>36.3</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>86.2</td>
</tr>
<tr>
<td>UAE</td>
<td>97.4</td>
</tr>
</tbody>
</table>

**Total OPEC: 330 Billion scm**

**Sources:** 3, 5, 7-9.
Selected OPEC crude spot prices, December 1986 – May 1987

- No quotation is available for Ecuador's Oriente grade for the last week of May.
Crude oil prices in nominal and real terms

Dollars per barrel

- Nominal price — Arabian Light price (yearly average)
- Arabian Light price deflated by OECD export price index

Sources: 3, 22.
Price breakdown of refined barrels

Dollars per barrel

- OPEC's share, including production costs
- Consuming government's tax
- Oil companies' profits and costs

**Composite petroleum products**

- **Western Europe**:
  - 29% (61.4)
  - 47% (58.1)
  - 24% (22%)

- **West Germany**:
  - 36%
  - 40%
  - 24%

- **France**:
  - 58%
  - 58%
  - 20%

- **US**:
  - 34.7
  - 34.7
  - 39%

- **Japan**:
  - 49%
  - 32%
  - 19%

**Gasoline**

- **Western Europe**:
  - 65%
  - 59%
  - 21%

- **West Germany**:
  - 14%
  - 82.0
  - 24%

- **France**:
  - 9%
  - 72%
  - 19%

- **US**:
  - 108.6
  - 40.6
  - 44%

- **Japan**:
  - 35%
  - 43%
  - 22%

- A barrel of composite petroleum products = a fictitious barrel containing a mixture of all petroleum products, calculated on a weighted basis.
- Sources: 6, 8, 23.
Petroleum export values

Billion dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>107.9</td>
<td>130.2</td>
<td>142.2</td>
<td>135.6</td>
<td>202.4</td>
<td>287.0</td>
<td>208.2</td>
<td>163.1</td>
<td>149.2</td>
<td>132.0</td>
<td>77.1</td>
<td></td>
</tr>
</tbody>
</table>

Sources: 6, 8, 24, 25.
Balance of payments on current account

Billion dollars

The figures are as at the end of each year.
## Gross national product

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross National Product (Billion dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>71.7</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10.4</td>
</tr>
<tr>
<td>Gabon</td>
<td>3.6</td>
</tr>
<tr>
<td>Indonesia</td>
<td>78.0</td>
</tr>
<tr>
<td>IR Iran</td>
<td>181.2</td>
</tr>
<tr>
<td>Iraq</td>
<td>55.8</td>
</tr>
<tr>
<td>Kuwait</td>
<td>17.6</td>
</tr>
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<td>SP Libyan AJ</td>
<td>17.5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>35.3</td>
</tr>
<tr>
<td>Qatar</td>
<td>5.7</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>74.7</td>
</tr>
<tr>
<td>UAE</td>
<td>22.2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>53.9</td>
</tr>
</tbody>
</table>

Sources: 6, 8, 24.
Trade flow from industrialized to developing countries

Percentage of value of total exports

<table>
<thead>
<tr>
<th>Primary</th>
<th>Manufactured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuels</td>
<td>Textiles/clothing</td>
</tr>
<tr>
<td>Food</td>
<td>Chemicals/engineering</td>
</tr>
<tr>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

Total trade $253.1 billion

Source: 26.
Trade flow from developing to industrialized countries

Percentage of value of total exports

<table>
<thead>
<tr>
<th>Primary</th>
<th>Manufactured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuels</td>
<td>Textiles/clothing</td>
</tr>
<tr>
<td>Food</td>
<td>Chemicals/engineering</td>
</tr>
<tr>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

Total trade $295.3 billion

Source: 26.
World GDP comparisons

Billion dollars

<table>
<thead>
<tr>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GDP</td>
<td>11,755</td>
</tr>
<tr>
<td>Population</td>
<td>1.2 billion</td>
</tr>
</tbody>
</table>

US | EEC | Japan | W Eur excl EEC | Aus/NZ | Asia* | Latin America | OPEC | Africa* | Middle East* |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4,162</td>
<td>1,959</td>
<td>561</td>
<td>187</td>
<td>900</td>
<td>685</td>
<td>640</td>
<td>187</td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>
World GDP per capita comparisons

Dollars

- Switzerland has the highest GDP per capita in the world, and Qatar has the highest figure in OPEC.
- The areas marked with a single asterisk exclude OPEC Member Countries.
- The double asterisk denotes the use of net material product calculations.
- The CPEs on this page are confined to the USSR and Eastern Europe.
- Sources: 3, 6, 8, 24, 27.
# Official development aid: the top ten donors

Net disbursements as percentage of GNP

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of GNP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>4.50</td>
</tr>
<tr>
<td>Kuwait</td>
<td>3.00</td>
</tr>
<tr>
<td>Norway</td>
<td>1.20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.00</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.89</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.85</td>
</tr>
<tr>
<td>France</td>
<td>0.49</td>
</tr>
<tr>
<td>Australia</td>
<td>0.49</td>
</tr>
<tr>
<td>Canada</td>
<td>0.48</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.46</td>
</tr>
</tbody>
</table>

- Source: 28.
Organization of the Petroleum Exporting Countries
Obere Donaustrasse 93, 1020 Vienna, Austria
Tel: 26 55 11. Telex: 134474.