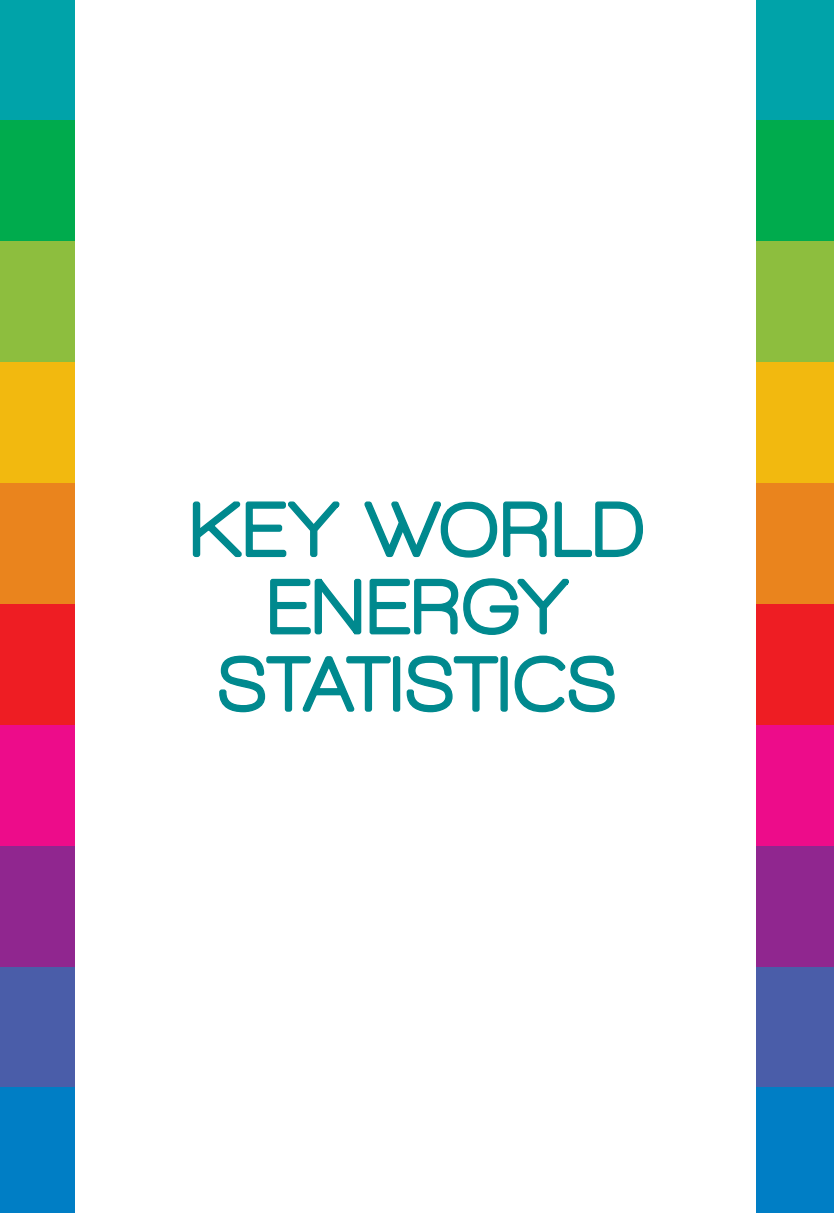


# Key world energy statistics

Also available on smartphones and tablets



# KEY WORLD ENERGY STATISTICS



## IEA member countries:

Australia  
Austria  
Belgium  
Canada  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Italy  
Japan  
Korea  
Luxembourg  
Netherlands  
New Zealand  
Norway  
Poland  
Portugal  
Slovak Republic  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom  
United States

The European Commission  
also participates in  
the work of the IEA.

# Foreword

The IEA was established in November 1974 to promote energy security and provide authoritative analysis on energy for its member countries and beyond. From the beginning, energy statistics have been and remain at the heart of all the work of the IEA. They provide a comprehensive view on energy production, transformation and final use, the factors that influence energy choices such as prices and RD&D and the wider impact of energy use on CO<sub>2</sub> emissions. Over the years with the cooperation of energy statisticians around the world, the IEA has gained recognition as one of the world's most authoritative sources for energy statistics.

The purpose of producing energy statistics is to use them to monitor changes in energy production and use, inform debate and provide a wider understanding of energy. In *Key World Energy Statistics (KWES)*, we look to highlight some of the key facts and trends from across the vast number of datasets the IEA produces to enable everyone to know more about energy. So if you want to know who are the top ten producers of oil or coal or the leading exporters of gas, what has been the evolution of electricity production since 1971, how energy use contributes to CO<sub>2</sub> emissions or if you simply want to see the world picture of energy production and use – that information and more is in *KWES*.

*KWES* is a summary of the comprehensive data made available by the IEA via its website: <http://www.iea.org/statistics/>. It is also available in app form for all major mobile devices.

Because energy plays such a vital role in our lives today, I hope that these statistics will not only inform but also help policymakers and others to make wise decisions so that energy is produced and consumed in a secure, affordable, efficient and sustainable manner.

As I like to say, in the world of energy, data always wins. I would therefore like to thank Duncan Millard, the IEA Chief Statistician and his excellent team for their work in ensuring we all have the data needed to gain a comprehensive understanding of energy.

Dr. Fatih Birol  
Executive Director, International Energy Agency



# TABLE OF CONTENTS



Supply

Transformation

Consumption

Energy balances

Prices

Emissions

Outlook

Energy indicators

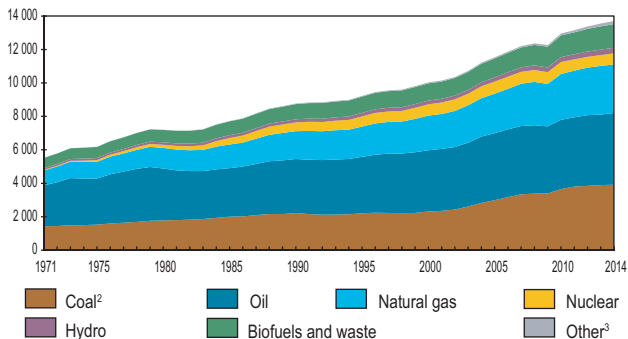
Conversion factors

Glossary

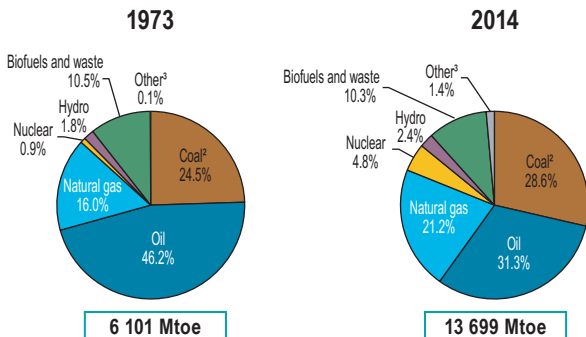
# Total primary energy supply by fuel

## World

World<sup>1</sup> total primary energy supply (TPES) from 1971 to 2014 by fuel (Mtoe)



### 1973 and 2014 fuel shares of TPES

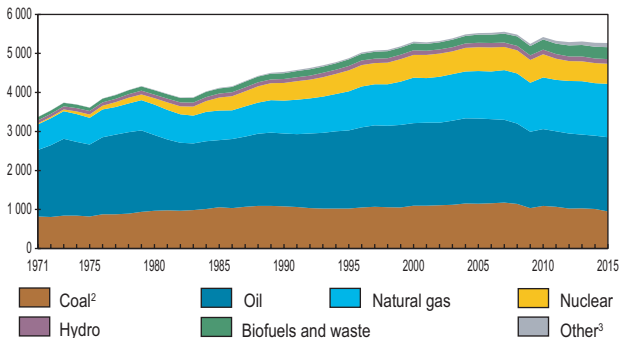


1. World includes international aviation and international marine bunkers.
2. In these graphs, peat and oil shale are aggregated with coal.
3. Includes geothermal, solar, wind, heat, etc.

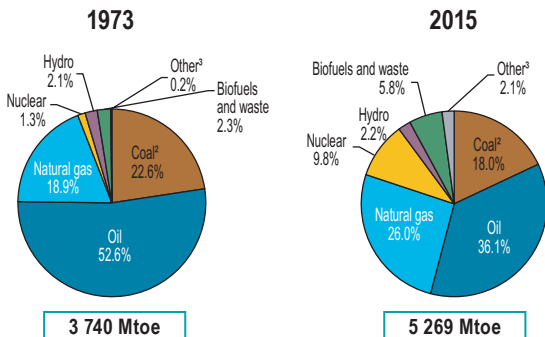
# Total primary energy supply by fuel

## OECD

OECD total primary energy supply<sup>1</sup> from 1971 to 2015 by fuel (Mtoe)



1973 and 2015 fuel shares of TPES<sup>1</sup>



1. Excludes electricity trade.

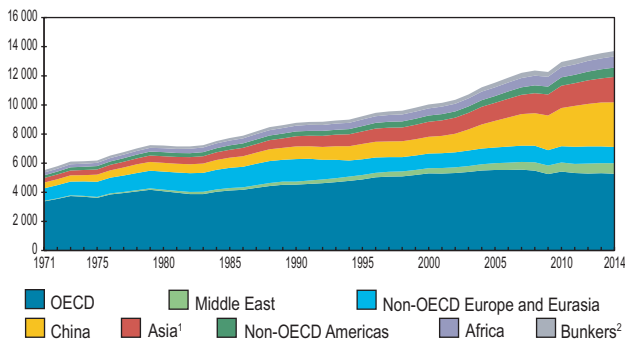
2. In these graphs, peat and oil shale are aggregated with coal.

3. Includes geothermal, solar, wind, heat, etc.

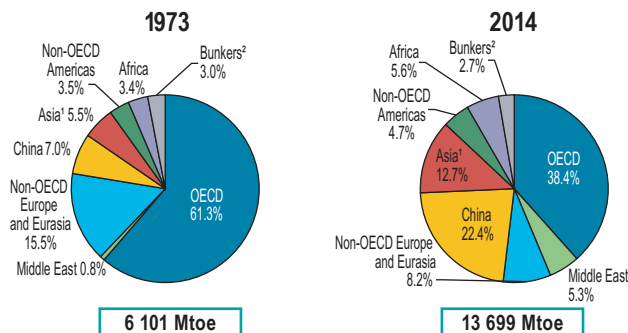
# Total primary energy supply by region

## World

World total primary energy supply from 1971 to 2014  
by region (Mtoe)



## 1973 and 2014 regional shares of TPES



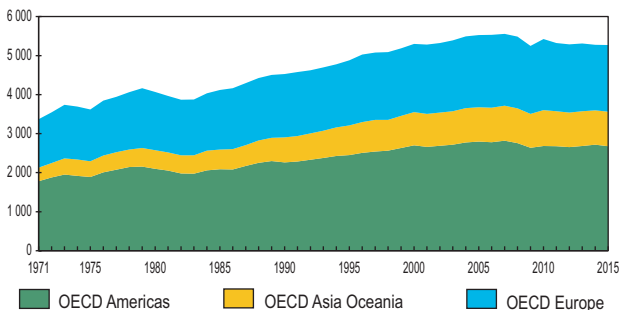
1. Asia excludes China and OECD countries of Asia.

2. Includes international aviation and international marine bunkers.

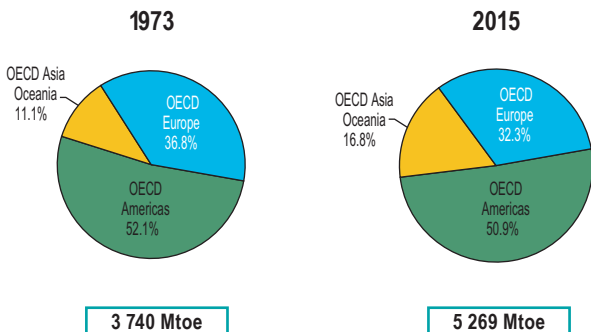
# Total primary energy supply by region

## OECD

OECD total primary energy supply<sup>1</sup> from 1971 to 2015  
by region (Mtoe)



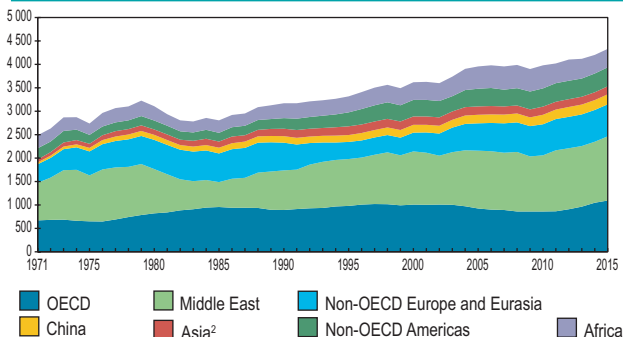
1973 and 2015 regional shares of TPES<sup>1</sup>



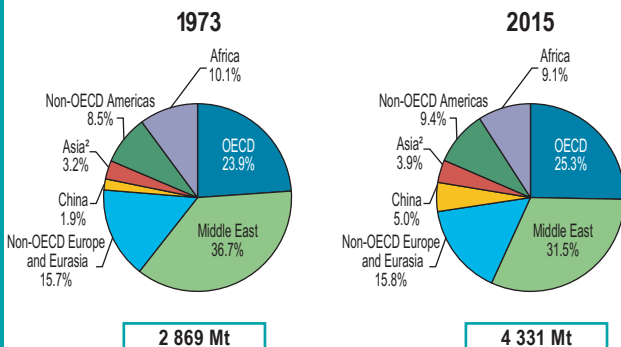
1. Excludes electricity trade.

# Crude oil production

Crude oil<sup>1</sup> production from 1971 to 2015  
by region (Mt)



1973 and 2015 regional shares of  
crude oil<sup>1</sup> production



1. Includes crude oil, NGL, feedstocks, additives and other hydrocarbons.

2. Asia excludes China and OECD countries of Asia.

## Producers, net exporters and net importers of crude oil<sup>1</sup>



| Producers              | Mt           | % of world total |
|------------------------|--------------|------------------|
| Saudi Arabia           | 572          | 13.2             |
| United States          | 567          | 13.1             |
| Russian Federation     | 533          | 12.3             |
| Canada                 | 221          | 5.1              |
| People's Rep. of China | 215          | 5.0              |
| Iraq                   | 175          | 4.0              |
| Islamic Rep. of Iran   | 168          | 3.9              |
| United Arab Emirates   | 160          | 3.7              |
| Kuwait                 | 160          | 3.7              |
| Venezuela              | 144          | 3.3              |
| Rest of the world      | 1 416        | 32.7             |
| <b>World</b>           | <b>4 331</b> | <b>100.0</b>     |

2015 provisional data

| Net exporters        | Mt           |
|----------------------|--------------|
| Saudi Arabia         | 354          |
| Russian Federation   | 222          |
| United Arab Emirates | 125          |
| Iraq                 | 124          |
| Nigeria              | 111          |
| Canada               | 104          |
| Kuwait               | 101          |
| Venezuela            | 91           |
| Angola               | 81           |
| Kazakhstan           | 64           |
| Others               | 515          |
| <b>Total</b>         | <b>1 892</b> |

2014 data

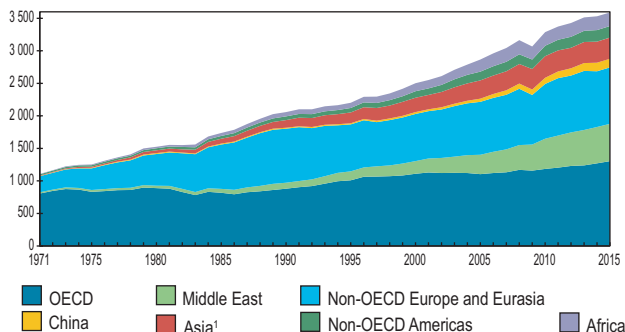
| Net importers          | Mt           |
|------------------------|--------------|
| United States          | 344          |
| People's Rep. of China | 308          |
| India                  | 189          |
| Japan                  | 165          |
| Korea                  | 126          |
| Germany                | 89           |
| Spain                  | 61           |
| Italy                  | 59           |
| France                 | 54           |
| Netherlands            | 54           |
| Others                 | 509          |
| <b>Total</b>           | <b>1 958</b> |

2014 data

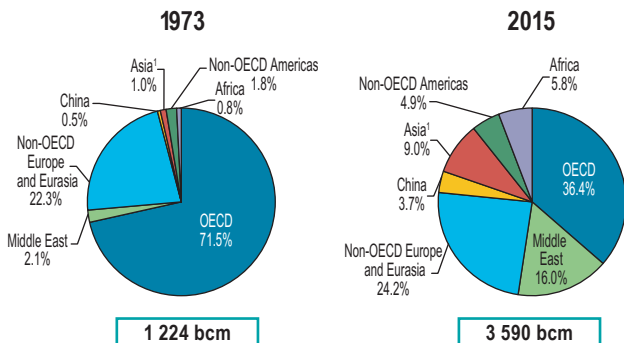
1. Includes production of crude oil, NGL, feedstocks, additives and other hydrocarbons. Excludes liquids from other fuel sources (renewable, coal and natural gas).

# Natural gas production

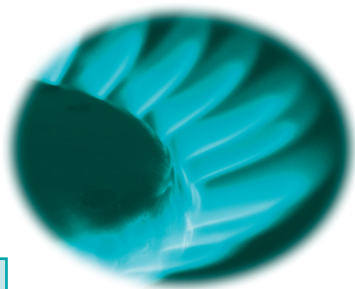
Natural gas production from 1971 to 2015 by region  
(billion cubic metres, bcm)



1973 and 2015 regional shares of  
natural gas production



1. Asia excludes China and OECD countries of Asia.

Producers, net exporters and net importers<sup>1</sup> of natural gas

| Producers              | bcm          | % of world total |
|------------------------|--------------|------------------|
| United States          | 769          | 21.4             |
| Russian Federation     | 638          | 17.8             |
| Islamic Rep. of Iran   | 184          | 5.1              |
| Qatar                  | 164          | 4.6              |
| Canada                 | 164          | 4.6              |
| People's Rep. of China | 134          | 3.7              |
| Norway                 | 122          | 3.4              |
| Saudi Arabia           | 87           | 2.4              |
| Turkmenistan           | 83           | 2.3              |
| Algeria                | 82           | 2.3              |
| Rest of the world      | 1 163        | 32.4             |
| <b>World</b>           | <b>3 590</b> | <b>100.0</b>     |

2015 provisional data

| Net exporters      | bcm        |
|--------------------|------------|
| Russian Federation | 192        |
| Qatar              | 115        |
| Norway             | 115        |
| Canada             | 59         |
| Turkmenistan       | 51         |
| Algeria            | 44         |
| Indonesia          | 33         |
| Australia          | 28         |
| Malaysia           | 25         |
| Nigeria            | 25         |
| Others             | 143        |
| <b>Total</b>       | <b>830</b> |

2015 provisional data

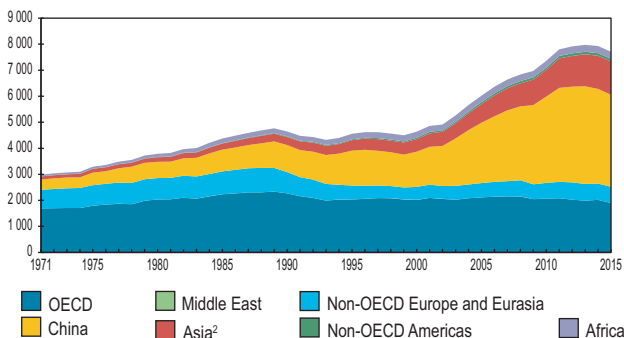
| Net importers          | bcm        |
|------------------------|------------|
| Japan                  | 117        |
| Germany                | 73         |
| Italy                  | 61         |
| People's Rep. of China | 56         |
| Turkey                 | 48         |
| Korea                  | 43         |
| France                 | 39         |
| Mexico                 | 37         |
| United Kingdom         | 31         |
| Spain                  | 27         |
| Others                 | 280        |
| <b>Total</b>           | <b>812</b> |

2015 provisional data

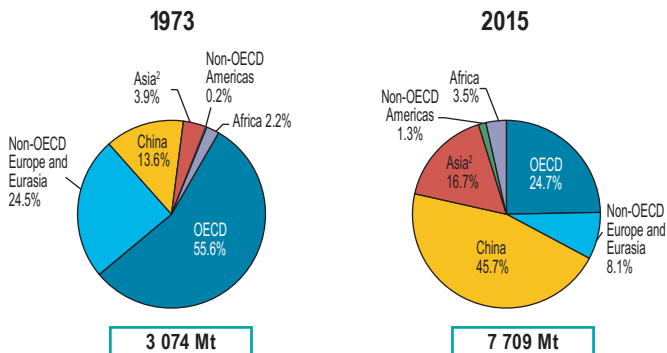
1. Net exports and net imports include pipeline gas and LNG.

# Coal production

Coal<sup>1</sup> production from 1971 to 2015  
by region (Mt)



1973 and 2015 regional shares of  
coal<sup>1</sup> production



1. Includes steam coal, coking coal, lignite and recovered coal.

2. Asia excludes China and OECD countries of Asia.

## Producers, net exporters and net importers of coal<sup>1</sup>



| Producers              | Mt           | % of world total |
|------------------------|--------------|------------------|
| People's Rep. of China | 3 527        | 45.8             |
| United States          | 813          | 10.5             |
| India                  | 691          | 9.0              |
| Australia              | 509          | 6.6              |
| Indonesia              | 469          | 6.1              |
| Russian Federation     | 349          | 4.5              |
| South Africa           | 252          | 3.3              |
| Germany                | 185          | 2.4              |
| Poland                 | 136          | 1.8              |
| Kazakhstan             | 107          | 1.4              |
| Rest of the world      | 671          | 8.6              |
| <b>World</b>           | <b>7 709</b> | <b>100.0</b>     |

2015 provisional data

| Net exporters      | Mt           |
|--------------------|--------------|
| Australia          | 392          |
| Indonesia          | 365          |
| Russian Federation | 129          |
| Colombia           | 82           |
| South Africa       | 76           |
| United States      | 57           |
| Kazakhstan         | 27           |
| Canada             | 23           |
| DPR of Korea       | 19           |
| Mongolia           | 14           |
| Others             | 9            |
| <b>Total</b>       | <b>1 193</b> |

2015 provisional data

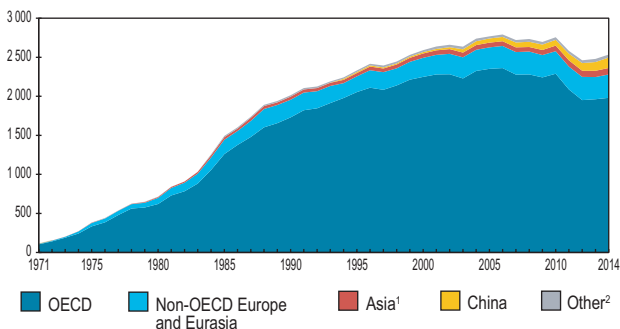
| Net importers          | Mt           |
|------------------------|--------------|
| India                  | 221          |
| People's Rep. of China | 199          |
| Japan                  | 192          |
| Korea                  | 135          |
| Chinese Taipei         | 66           |
| Germany                | 54           |
| Turkey                 | 34           |
| United Kingdom         | 25           |
| Malaysia               | 24           |
| Thailand               | 23           |
| Others                 | 233          |
| <b>Total</b>           | <b>1 206</b> |

2015 provisional data

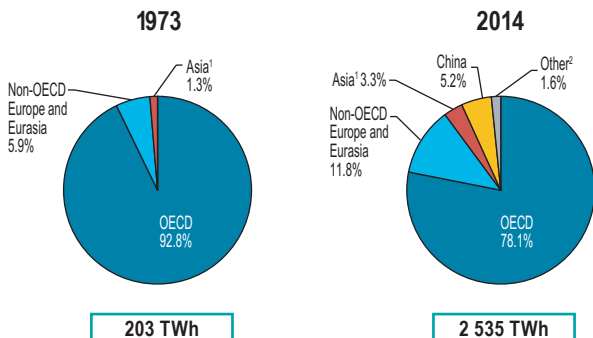
1. Includes steam coal, coking coal, lignite and recovered coal.

# Nuclear production

Nuclear production from 1971 to 2014  
by region (TWh)



1973 and 2014 regional shares of  
nuclear production



1. Asia excludes China and OECD countries of Asia.

2. Other includes Africa, Non-OECD Americas and the Middle East.

## Producers of nuclear electricity



| Producers              | TWh          | % of world total |
|------------------------|--------------|------------------|
| United States          | 831          | 32.8             |
| France                 | 436          | 17.2             |
| Russian Federation     | 181          | 7.1              |
| Korea                  | 156          | 6.2              |
| People's Rep. of China | 133          | 5.2              |
| Canada                 | 108          | 4.3              |
| Germany                | 97           | 3.8              |
| Ukraine                | 88           | 3.5              |
| Sweden                 | 65           | 2.6              |
| United Kingdom         | 64           | 2.5              |
| Rest of the world      | 376          | 14.8             |
| <b>World</b>           | <b>2 535</b> | <b>100.0</b>     |

2014 data

1. Excludes countries  
with no nuclear production.

| Net installed capacity | GW         |
|------------------------|------------|
| United States          | 99         |
| France                 | 63         |
| Japan                  | 42         |
| Russian Federation     | 25         |
| People's Rep. of China | 24         |
| Korea                  | 21         |
| Germany                | 14         |
| Canada                 | 14         |
| Ukraine                | 13         |
| Sweden                 | 9          |
| Rest of the world      | 60         |
| <b>World</b>           | <b>384</b> |

2014 data

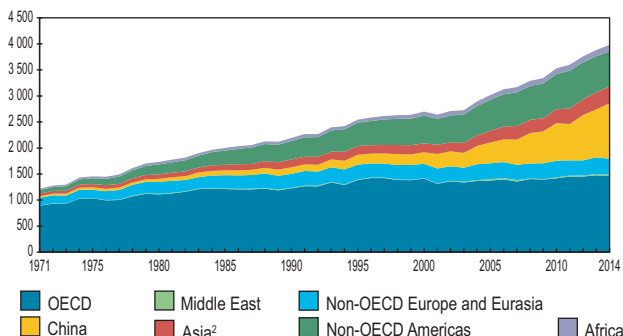
Sources: IEA,  
International Atomic  
Energy Agency.

| Country<br>(top-ten producers) | % of nuclear in total domestic electricity generation |
|--------------------------------|-------------------------------------------------------|
| France                         | 78.4                                                  |
| Ukraine                        | 48.6                                                  |
| Sweden                         | 42.3                                                  |
| Korea                          | 28.7                                                  |
| United States                  | 19.2                                                  |
| United Kingdom                 | 19.0                                                  |
| Russian Federation             | 17.0                                                  |
| Canada                         | 16.4                                                  |
| Germany                        | 15.6                                                  |
| People's Rep. of China         | 2.3                                                   |
| Rest of the world <sup>1</sup> | 9.4                                                   |
| <b>World</b>                   | <b>10.7</b>                                           |

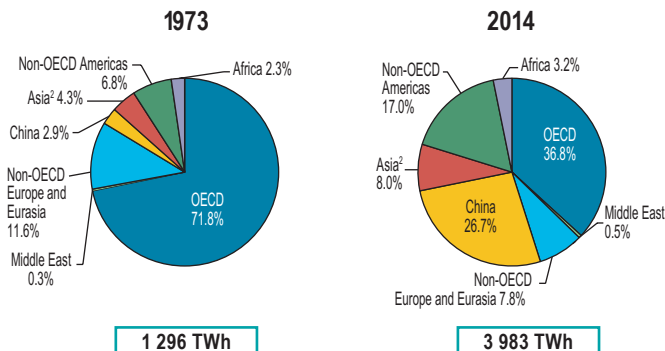
2014 data

# Hydro production

Hydro production<sup>1</sup> from 1971 to 2014  
by region (TWh)



1973 and 2014 regional shares of  
hydro production<sup>1</sup>



1. Includes electricity production from pumped storage.

2. Asia excludes China and OECD countries of Asia.

Producers of hydro electricity<sup>1</sup>

| Producers              | TWh          | % of world total |
|------------------------|--------------|------------------|
| People's Rep. of China | 1 064        | 26.7             |
| Canada                 | 383          | 9.6              |
| Brazil                 | 373          | 9.4              |
| United States          | 282          | 7.1              |
| Russian Federation     | 177          | 4.4              |
| Norway                 | 137          | 3.4              |
| India                  | 132          | 3.3              |
| Venezuela              | 87           | 2.2              |
| Japan                  | 87           | 2.2              |
| France                 | 69           | 1.7              |
| Rest of the world      | 1 192        | 30.0             |
| <b>World</b>           | <b>3 983</b> | <b>100.0</b>     |

2014 data

1. Includes electricity production from pumped storage.

2. Excludes countries with no hydro production.

| Net installed capacity | GW           |
|------------------------|--------------|
| People's Rep. of China | 311          |
| United States          | 102          |
| Brazil                 | 89           |
| Canada                 | 76           |
| Russian Federation     | 51           |
| Japan                  | 50           |
| India                  | 40           |
| Norway                 | 31           |
| France                 | 25           |
| Turkey                 | 24           |
| Rest of the world      | 372          |
| <b>World</b>           | <b>1 171</b> |

2014 data

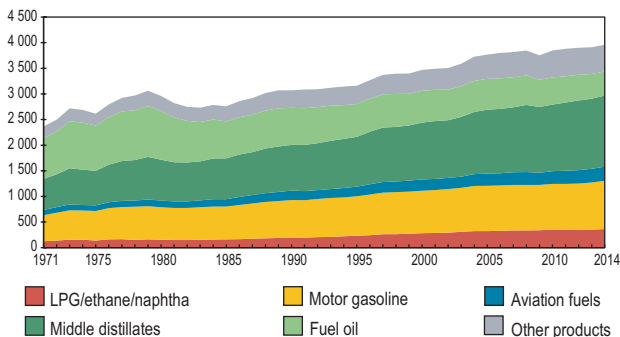
Sources: IEA, United Nations.

| Country (top-ten producers)    | % of hydro in total domestic electricity generation |
|--------------------------------|-----------------------------------------------------|
| Norway                         | 96.0                                                |
| Venezuela                      | 68.3                                                |
| Brazil                         | 63.2                                                |
| Canada                         | 58.3                                                |
| People's Rep. of China         | 18.7                                                |
| Russian Federation             | 16.7                                                |
| France                         | 12.2                                                |
| India                          | 10.2                                                |
| Japan                          | 8.4                                                 |
| United States                  | 6.5                                                 |
| Rest of the world <sup>2</sup> | 15.6                                                |
| <b>World</b>                   | <b>16.7</b>                                         |

2014 data

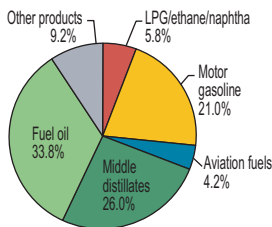
## Refining by product

World refinery output from 1971 to 2014  
by product (Mt)



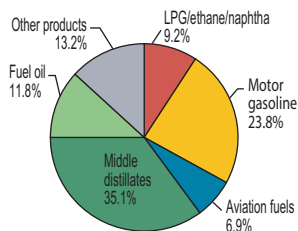
1973 and 2014 shares of  
refinery output by product

1973



2 719 Mt

2014



3 959 Mt

## Producers, net exporters and net importers of oil products



| Producers              | Mt           | % of world total |
|------------------------|--------------|------------------|
| United States          | 820          | 20.7             |
| People's Rep. of China | 485          | 12.3             |
| Russian Federation     | 283          | 7.1              |
| India                  | 228          | 5.8              |
| Japan                  | 163          | 4.1              |
| Korea                  | 129          | 3.3              |
| Brazil                 | 113          | 2.9              |
| Saudi Arabia           | 107          | 2.7              |
| Germany                | 97           | 2.5              |
| Canada                 | 89           | 2.2              |
| Rest of the world      | 1 445        | 36.4             |
| <b>World</b>           | <b>3 959</b> | <b>100.0</b>     |

2014 data

1. The discrepancy between total net exports and total net imports arises from different data sources and possible misallocation of bunkers into exports for some countries.

| Net exporters            | Mt         |
|--------------------------|------------|
| Russian Federation       | 116        |
| United States            | 86         |
| India                    | 45         |
| Saudi Arabia             | 41         |
| Kuwait                   | 29         |
| Algeria                  | 21         |
| Venezuela                | 21         |
| Qatar                    | 20         |
| Korea                    | 19         |
| Belarus                  | 14         |
| Others                   | 141        |
| <b>Total<sup>1</sup></b> | <b>553</b> |

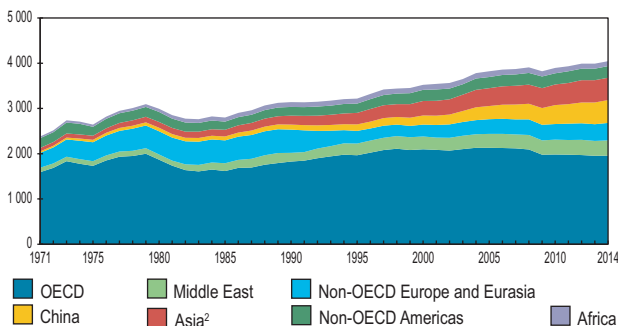
2014 data

| Net importers            | Mt         |
|--------------------------|------------|
| Japan                    | 29         |
| Singapore                | 26         |
| Indonesia                | 23         |
| France                   | 22         |
| Mexico                   | 19         |
| Australia                | 18         |
| Brazil                   | 18         |
| Germany                  | 16         |
| Hong Kong, China         | 16         |
| Turkey                   | 16         |
| Others                   | 294        |
| <b>Total<sup>1</sup></b> | <b>497</b> |

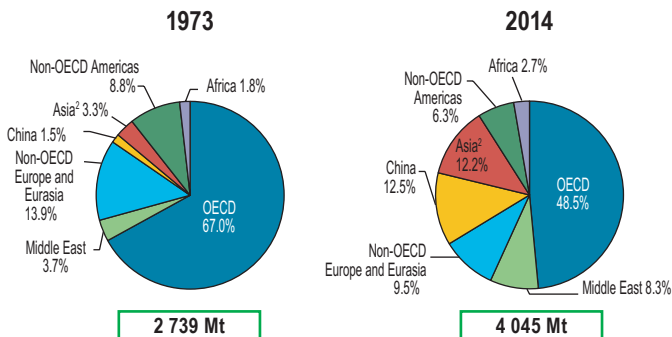
2014 data

## Refining by region

World refinery intake<sup>1</sup> from 1971 to 2014  
by region (Mt)



1973 and 2014 regional shares of  
refinery intake<sup>1</sup>



1. Includes crude oil, NGL, refinery feedstocks, additives and other hydrocarbons.

2. Asia excludes China and OECD countries of Asia.

## Refinery capacity, net exporters and net importers of oil<sup>1</sup>



| Crude distillation capacity | kb/cd         | % of world total |
|-----------------------------|---------------|------------------|
| United States               | 17 996        | 18.5             |
| People's Rep. of China      | 13 160        | 13.5             |
| Russian Federation          | 6 291         | 6.5              |
| India                       | 4 694         | 4.8              |
| Japan                       | 3 865         | 4.0              |
| Korea                       | 3 296         | 3.4              |
| Saudi Arabia                | 2 906         | 3.0              |
| Brazil                      | 2 175         | 2.2              |
| Germany                     | 2 022         | 2.1              |
| Canada                      | 1 980         | 2.0              |
| Rest of the world           | 38 813        | 40.0             |
| <b>World</b>                | <b>97 198</b> | <b>100.0</b>     |

2015 data

| Net exporters        | Mt           |
|----------------------|--------------|
| Saudi Arabia         | 396          |
| Russian Federation   | 338          |
| Kuwait               | 131          |
| United Arab Emirates | 117          |
| Canada               | 114          |
| Venezuela            | 112          |
| Iraq                 | 110          |
| Nigeria              | 103          |
| Angola               | 77           |
| Norway               | 74           |
| Others               | 506          |
| <b>Total</b>         | <b>2 078</b> |

2014 data

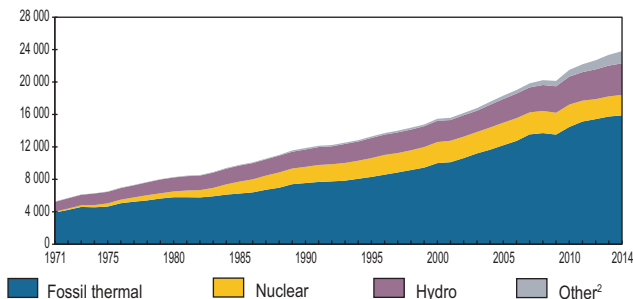
| Net importers          | Mt           |
|------------------------|--------------|
| People's Rep. of China | 320          |
| United States          | 258          |
| Japan                  | 195          |
| India                  | 145          |
| Korea                  | 107          |
| Germany                | 105          |
| France                 | 76           |
| Singapore              | 67           |
| Spain                  | 58           |
| Italy                  | 50           |
| Others                 | 707          |
| <b>Total</b>           | <b>2 088</b> |

2014 data

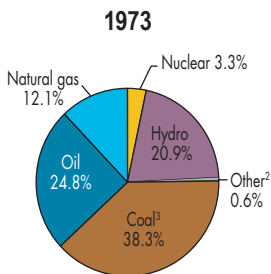
1. Includes crude oil and oil products.

# Electricity generation by fuel

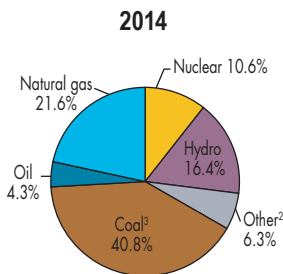
World electricity generation<sup>1</sup> from 1971 to 2014  
by fuel (TWh)



1973 and 2014 fuel shares of  
electricity generation<sup>1</sup>



**6 131 TWh**



**23 816 TWh**

1. Excludes electricity generation from pumped storage.

2. Includes geothermal, solar, wind, heat, etc.

3. In these graphs, peat and oil shale are aggregated with coal.

## Electricity production from fossil fuels



| Coal <sup>1</sup>      | TWh          |
|------------------------|--------------|
| People's Rep. of China | 4 115        |
| United States          | 1 713        |
| India                  | 967          |
| Japan                  | 349          |
| Germany                | 285          |
| South Africa           | 232          |
| Korea                  | 232          |
| Russian Federation     | 158          |
| Australia              | 152          |
| Poland                 | 132          |
| Rest of the world      | 1 372        |
| <b>World</b>           | <b>9 707</b> |

2014 data

| Oil                  | TWh          |
|----------------------|--------------|
| Saudi Arabia         | 152          |
| Japan                | 116          |
| Islamic Rep. of Iran | 59           |
| Iraq                 | 50           |
| Kuwait               | 43           |
| Pakistan             | 42           |
| United States        | 40           |
| Brazil               | 35           |
| Mexico               | 33           |
| Indonesia            | 26           |
| Rest of the world    | 427          |
| <b>World</b>         | <b>1 023</b> |

2014 data

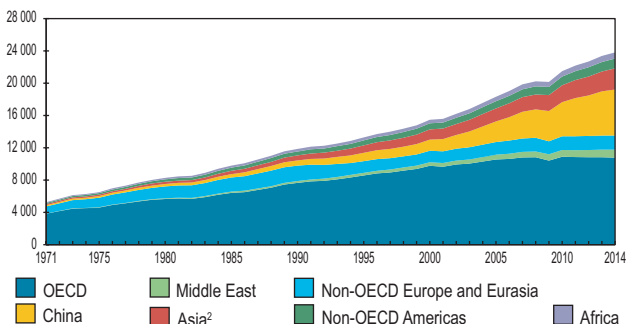
| Natural gas          | TWh          |
|----------------------|--------------|
| United States        | 1 161        |
| Russian Federation   | 533          |
| Japan                | 421          |
| Islamic Rep. of Iran | 196          |
| Mexico               | 172          |
| Saudi Arabia         | 160          |
| Egypt                | 135          |
| Korea                | 130          |
| Turkey               | 121          |
| Thailand             | 119          |
| Rest of the world    | 2 007        |
| <b>World</b>         | <b>5 155</b> |

2014 data

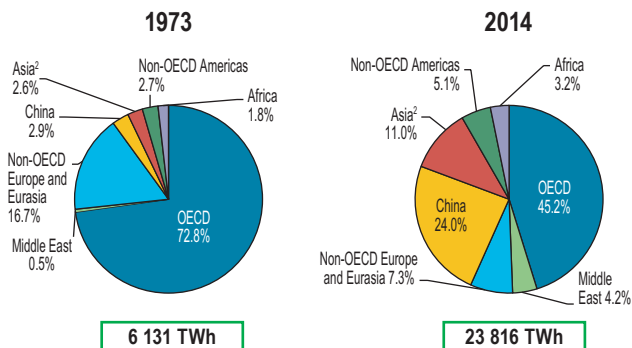
1. In this table, peat and oil shale are aggregated with coal.

# Electricity generation by region

World electricity generation<sup>1</sup> from 1971 to 2014  
by region (TWh)



1973 and 2014 regional shares of  
electricity generation<sup>1</sup>



1. Excludes electricity generation from pumped storage.

2. Asia excludes China and OECD countries of Asia.

## Producers, net exporters and net importers of electricity



| Producers <sup>1</sup> | TWh           | % of world total |
|------------------------|---------------|------------------|
| People's Rep. of China | 5 666         | 23.8             |
| United States          | 4 319         | 18.1             |
| India                  | 1 287         | 5.4              |
| Russian Federation     | 1 062         | 4.5              |
| Japan                  | 1 036         | 4.4              |
| Canada                 | 656           | 2.8              |
| Germany                | 622           | 2.6              |
| Brazil                 | 591           | 2.5              |
| France                 | 557           | 2.3              |
| Korea                  | 546           | 2.3              |
| Rest of the world      | 7 474         | 31.3             |
| <b>World</b>           | <b>23 816</b> | <b>100.0</b>     |

2014 data

| Net exporters          | TWh        |
|------------------------|------------|
| France                 | 67         |
| Canada                 | 46         |
| Paraguay               | 41         |
| Germany                | 34         |
| Czech Republic         | 16         |
| Sweden                 | 16         |
| Norway                 | 16         |
| People's Rep. of China | 11         |
| Bulgaria               | 9          |
| Ukraine                | 8          |
| Others                 | 64         |
| <b>Total</b>           | <b>328</b> |

2014 data

| Net importers  | TWh        |
|----------------|------------|
| United States  | 53         |
| Italy          | 44         |
| Brazil         | 34         |
| United Kingdom | 21         |
| Finland        | 18         |
| Belgium        | 18         |
| Netherlands    | 15         |
| Hungary        | 13         |
| Iraq           | 12         |
| Thailand       | 11         |
| Others         | 117        |
| <b>Total</b>   | <b>356</b> |

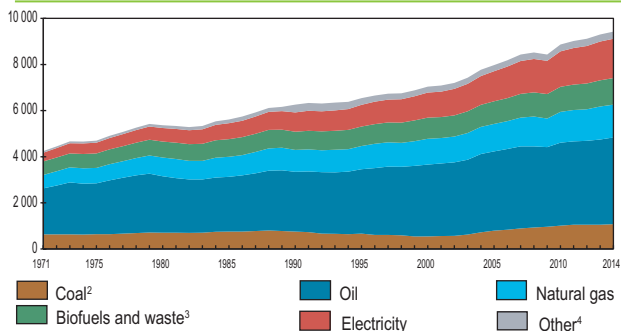
2014 data

1. Gross production minus production from pumped storage plants.

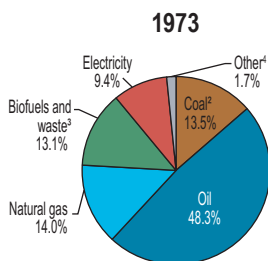
# Total final consumption by fuel

## World

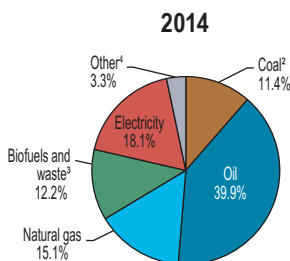
World<sup>1</sup> total final consumption from 1971 to 2014 by fuel (Mtoe)



1973 and 2014 fuel shares of total final consumption



**4 661 Mtoe**



**9 425 Mtoe**

1. World includes international aviation and international marine bunkers.

2. In these graphs, peat and oil shale are aggregated with coal.

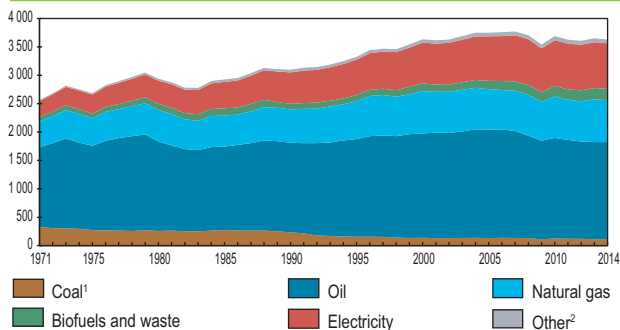
3. Data for biofuels and waste final consumption have been estimated for a number of countries.

4. Includes geothermal, solar, wind, heat, etc.

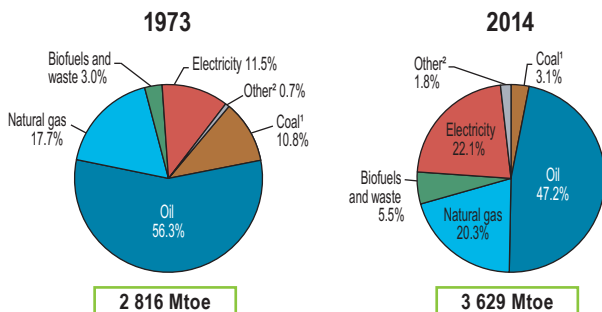
# Total final consumption by fuel

## OECD

OECD total final consumption from 1971 to 2014  
by fuel (Mtoe)



1973 and 2014 fuel shares of  
total final consumption



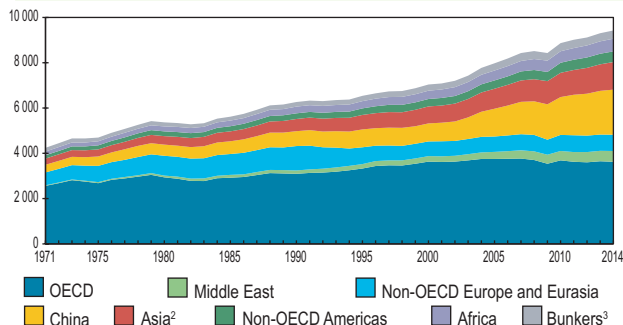
1. In these graphs, peat and oil shale are aggregated with coal.

2. Includes geothermal, solar, wind, heat, etc.

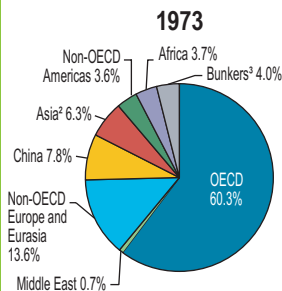
# Total final consumption by region

## World

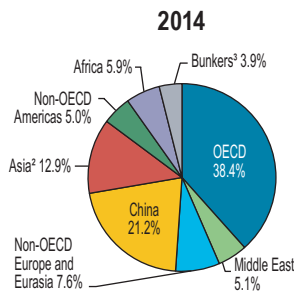
World total final consumption<sup>1</sup> from 1971 to 2014  
by region (Mtoe)



1973 and 2014 regional shares of  
total final consumption<sup>1</sup>



**4 661 Mtoe**



**9 425 Mtoe**

1. Data for biofuels and waste final consumption have been estimated for a number of countries.

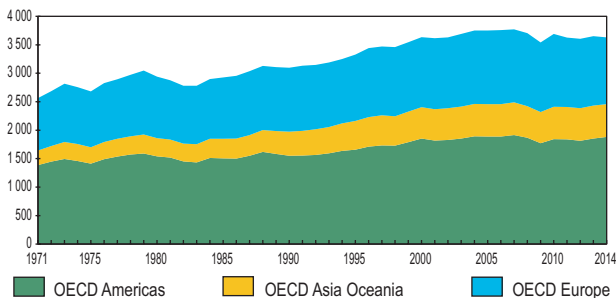
2. Asia excludes China and OECD countries of Asia.

3. Includes international aviation and international marine bunkers.

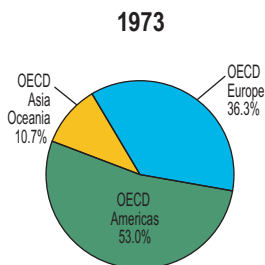
# Total final consumption by region

## OECD

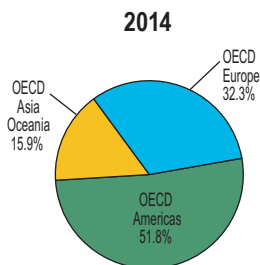
OECD total final consumption from 1971 to 2014  
by region (Mtoe)



1974 and 2014 regional shares of  
total final consumption



**2 816 Mtoe**

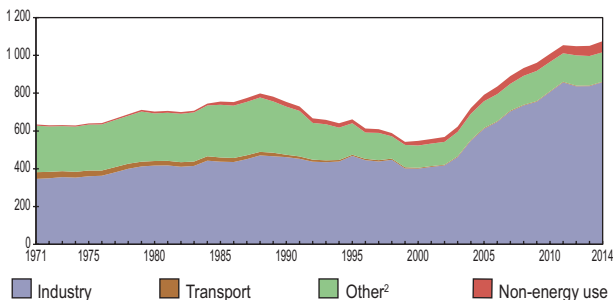


**3 629 Mtoe**

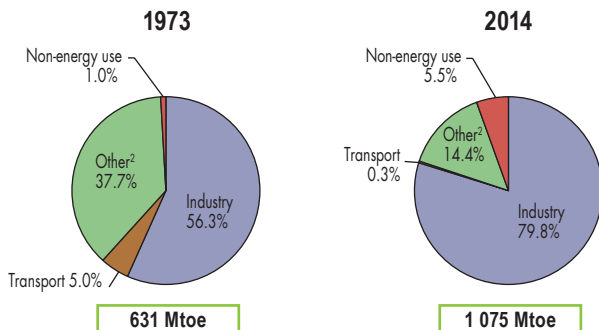
# Total final consumption by sector

## Coal<sup>1</sup>

Total final consumption from 1971 to 2014  
by sector (Mtoe)



1973 and 2014 shares of  
world coal<sup>1</sup> consumption



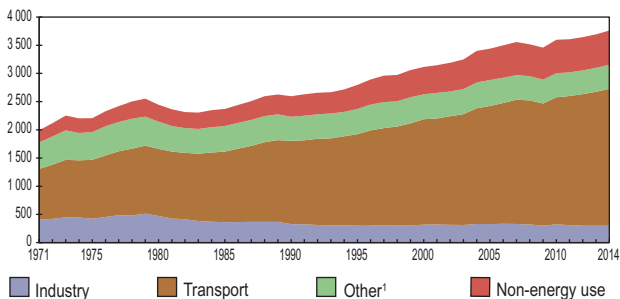
1. In these graphs, peat and oil shale are aggregated with coal.

2. Includes agriculture, commercial and public services, residential, and non-specified other.

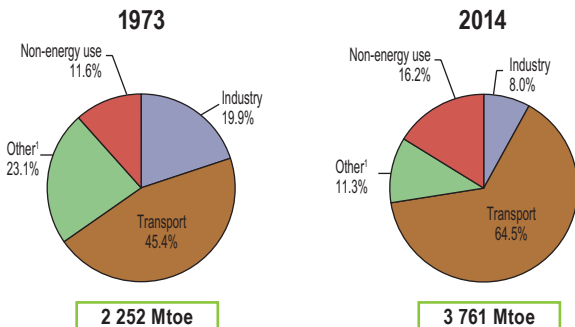
# Total final consumption by sector

## Oil

Total final consumption from 1971 to 2014  
by sector (Mtoe)



1973 and 2014 shares of  
world oil consumption

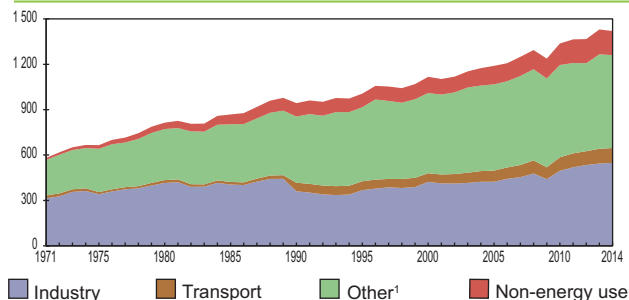


1. Includes agriculture, commercial and public services, residential, and non-specified other.

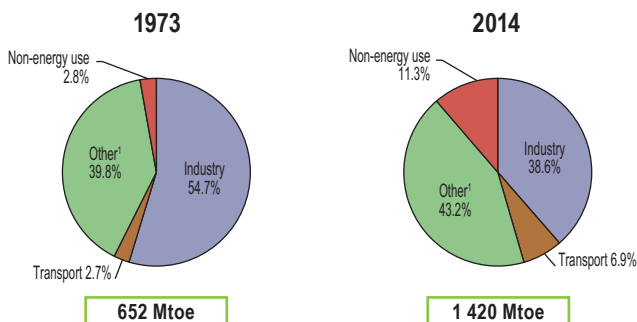
# Total final consumption by sector

## Natural gas

Total final consumption from 1971 to 2014  
by sector (Mtoe)



1973 and 2014 shares of  
world natural gas consumption

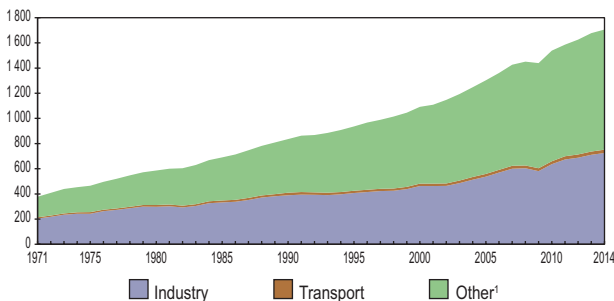


1. Includes agriculture, commercial and public services, residential, and non-specified other.

# Total final consumption by sector

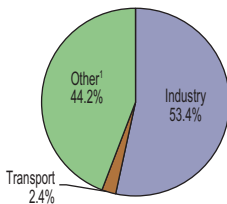
## Electricity

Total final consumption from 1971 to 2014  
by sector (Mtoe)



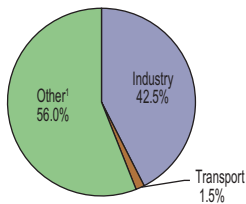
1973 and 2014 shares of  
world electricity consumption

1973



**440 Mtoe**

2014



**1 706 Mtoe**

1. Includes agriculture, commercial and public services, residential,  
and non-specified other.

# Simplified energy balance table

## World

1973

(Mtoe)

| SUPPLY AND CONSUMPTION  | Coal <sup>1</sup> | Crude oil      | Oil products   | Natural gas   | Nuclear      | Hydro         | Biofuels and waste <sup>2</sup> | Other <sup>3</sup> | Total          |
|-------------------------|-------------------|----------------|----------------|---------------|--------------|---------------|---------------------------------|--------------------|----------------|
| Production              | 1474.00           | 2938.38        | -              | 990.98        | 53.05        | 110.31        | 640.84                          | 6.13               | 6213.69        |
| Imports                 | 140.06            | 1561.97        | 409.59         | 73.40         | -            | -             | 0.13                            | 8.15               | 2193.29        |
| Exports                 | -130.35           | -1613.00       | -442.94        | -72.56        | -            | -             | -0.19                           | -8.31              | -2267.34       |
| Stock changes           | 12.48             | -19.81         | -16.37         | -15.09        | -            | -             | 0.06                            | -                  | -38.74         |
| <b>TPES</b>             | <b>1496.19</b>    | <b>2867.54</b> | <b>-49.73</b>  | <b>976.73</b> | <b>53.05</b> | <b>110.31</b> | <b>640.84</b>                   | <b>5.96</b>        | <b>6100.90</b> |
| Transfers               | -                 | -46.76         | 48.78          | -             | -            | -             | -                               | -                  | 2.02           |
| Statistical diff.       | 0.99              | 12.13          | -6.18          | 4.78          | -            | -             | -0.17                           | -0.19              | 11.35          |
| Electricity plants      | -555.56           | -22.91         | -318.13        | -160.00       | -52.95       | -110.31       | -2.21                           | 503.74             | -718.32        |
| CHP plants              | -86.40            | -              | -28.62         | -50.84        | -0.10        | -             | -1.11                           | 100.96             | -66.10         |
| Heat plants             | -7.81             | -              | -0.90          | -0.68         | -            | -             | -0.80                           | 7.11               | -3.08          |
| Blast furnaces          | -81.58            | -              | -2.72          | -             | -            | -             | -0.06                           | -                  | -84.35         |
| Gas works               | 9.85              | -0.60          | -9.07          | -6.18         | -            | -             | -                               | -                  | -6.01          |
| Coke ovens <sup>4</sup> | -99.54            | -              | -0.68          | -0.19         | -            | -             | -0.02                           | -                  | -100.43        |
| Oil refineries          | -                 | -2782.93       | 2762.10        | -             | -            | -             | -                               | -                  | -20.82         |
| Petchem. plants         | -                 | 5.09           | -5.37          | -             | -            | -             | -                               | -                  | -0.28          |
| Liquefaction plants     | -0.73             | 0.23           | -              | -             | -            | -             | -                               | -                  | -0.50          |
| Other transf.           | -                 | -              | -0.12          | -0.03         | -            | -             | -27.02                          | -                  | -27.17         |
| Energy ind. own use     | -34.93            | -2.59          | -158.81        | -105.99       | -            | -             | -0.20                           | -57.68             | -360.18        |
| Losses                  | -9.06             | -7.07          | -0.27          | -6.03         | -            | -             | -0.25                           | -43.15             | -65.83         |
| <b>TFC</b>              | <b>631.43</b>     | <b>22.14</b>   | <b>2230.28</b> | <b>651.57</b> | <b>-</b>     | <b>-</b>      | <b>609.10</b>                   | <b>516.76</b>      | <b>4661.19</b> |
| Industry                | 355.69            | 16.41          | 432.59         | 356.29        | -            | -             | 86.59                           | 286.91             | 1534.49        |
| Transport <sup>5</sup>  | 31.88             | -              | 1020.83        | 17.72         | -            | -             | 0.24                            | 10.60              | 1081.26        |
| Other                   | 237.85            | 0.00           | 520.41         | 259.19        | -            | -             | 522.18                          | 219.26             | 1758.88        |
| Non-energy use          | 6.01              | 5.73           | 256.45         | 18.37         | -            | -             | -                               | -                  | 286.56         |

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat and electricity trade.

4. Also includes patent fuel, BKB and peat briquette plants.

5. Includes international aviation and international marine bunkers.

# Simplified energy balance table

## World

2014

(Mtoe)

| SUPPLY AND CONSUMPTION  | Coal <sup>1</sup> | Crude oil      | Oil products   | Natural gas    | Nuclear       | Hydro         | Biofuels and waste <sup>2</sup> | Other <sup>3</sup> | Total           |
|-------------------------|-------------------|----------------|----------------|----------------|---------------|---------------|---------------------------------|--------------------|-----------------|
| Production              | 3976.14           | 4308.45        | -              | 2928.32        | 661.35        | 334.94        | 1413.06                         | 183.17             | 13805.44        |
| Imports                 | 842.15            | 2213.37        | 1193.32        | 844.32         | -             | -             | 20.22                           | 61.73              | 5175.12         |
| Exports                 | -863.14           | -2159.50       | -1242.64       | -863.25        | -             | -             | -18.97                          | -59.35             | -5206.85        |
| Stock changes           | -36.66            | -12.46         | -15.23         | -8.81          | -             | -             | -1.41                           | -                  | -74.58          |
| <b>TPES</b>             | <b>3918.49</b>    | <b>4349.86</b> | <b>-64.56</b>  | <b>2900.58</b> | <b>661.35</b> | <b>334.94</b> | <b>1412.91</b>                  | <b>185.55</b>      | <b>13699.13</b> |
| Transfers               | -0.47             | -204.86        | 231.24         | -              | -             | -             | -                               | -                  | 25.92           |
| Statistical diff.       | -21.91            | 0.12           | 4.51           | 14.68          | -             | -             | 0.16                            | -0.94              | -3.38           |
| Electricity plants      | -2112.98          | -40.62         | -201.89        | -771.07        | -653.73       | -334.94       | -95.03                          | 1726.81            | -2483.47        |
| CHP plants              | -164.61           | -0.01          | -17.07         | -307.53        | -7.62         | -             | -57.43                          | 325.45             | -228.81         |
| Heat plants             | -130.32           | -0.68          | -13.19         | -78.82         | -             | -             | -11.45                          | 178.30             | -56.17          |
| Blast furnaces          | -209.84           | -              | -0.38          | -0.16          | -             | -             | -0.05                           | -                  | -210.43         |
| Gas works               | -10.92            | -              | -2.73          | 5.08           | -             | -             | -0.09                           | -                  | -8.67           |
| Coke ovens <sup>4</sup> | -76.25            | -              | -2.80          | -0.01          | -             | -             | -0.12                           | -                  | -79.19          |
| Oil refineries          | -                 | -4123.03       | 4049.60        | -              | -             | -             | -                               | -                  | -73.43          |
| Petchem. plants         | -                 | 33.00          | -32.62         | -              | -             | -             | -                               | -                  | 0.38            |
| Liquefaction plants     | -9.67             | 14.03          | -              | -17.42         | -             | -             | -                               | -                  | -13.07          |
| Other transf.           | -0.43             | 10.07          | -0.52          | -11.88         | -             | -             | -82.90                          | -0.73              | -86.40          |
| Energy ind. own use     | -101.76           | -11.42         | -205.29        | -291.69        | -             | -             | -13.94                          | -209.33            | -833.44         |
| Losses                  | -3.89             | -8.90          | -0.65          | -21.77         | -             | -             | -0.19                           | -188.89            | -224.29         |
| <b>TFC</b>              | <b>1075.42</b>    | <b>17.57</b>   | <b>3743.64</b> | <b>1419.98</b> | <b>-</b>      | <b>-</b>      | <b>1151.86</b>                  | <b>2016.21</b>     | <b>9424.69</b>  |
| Industry                | 858.49            | 6.80           | 294.67         | 548.54         | -             | -             | 193.52                          | 849.15             | 2751.17         |
| Transport <sup>5</sup>  | 2.86              | -              | 2426.33        | 97.90          | -             | -             | 73.89                           | 26.04              | 2627.02         |
| Other                   | 155.39            | 0.18           | 424.53         | 613.41         | -             | -             | 884.45                          | 1141.03            | 3218.98         |
| Non-energy use          | 58.68             | 10.60          | 598.11         | 160.13         | -             | -             | -                               | -                  | 827.52          |

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat and electricity trade.

4. Also includes patent fuel, BKB and peat briquette plants.

5. Includes international aviation and international marine bunkers.

# Simplified energy balance table

## OECD

1973

(Mtoe)

| SUPPLY AND CONSUMPTION  | Coal <sup>1</sup> | Crude oil      | Oil products   | Natural gas   | Nuclear      | Hydro        | Biofuels and waste <sup>2</sup> | Other <sup>3</sup> | Total          |
|-------------------------|-------------------|----------------|----------------|---------------|--------------|--------------|---------------------------------|--------------------|----------------|
| Production              | 819.10            | 710.51         | -              | 706.22        | 49.22        | 78.94        | 87.29                           | 6.13               | 2457.41        |
| Imports                 | 121.92            | 1277.50        | 336.20         | 62.55         | -            | -            | 0.03                            | 7.55               | 1805.76        |
| Exports                 | -111.10           | -63.59         | -172.72        | -50.38        | -            | -            | -0.01                           | -7.01              | -404.81        |
| Intl. marine bunkers    | -                 | -              | -73.65         | -             | -            | -            | -                               | -                  | -73.65         |
| Intl. aviation bunkers  | -                 | -              | -24.64         | -             | -            | -            | -                               | -                  | -24.64         |
| Stock changes           | 14.54             | -10.78         | -11.36         | -12.07        | -            | -            | 0.06                            | -                  | -19.62         |
| <b>TPES</b>             | <b>844.46</b>     | <b>1913.65</b> | <b>53.83</b>   | <b>706.32</b> | <b>49.22</b> | <b>78.94</b> | <b>87.36</b>                    | <b>6.66</b>        | <b>3740.45</b> |
| Transfers               | -                 | -41.28         | 42.49          | -             | -            | -            | -                               | -                  | 1.22           |
| Statistical diff.       | 14.80             | 11.29          | 2.56           | -5.61         | -            | -            | -0.00                           | 0.00               | 23.04          |
| Electricity plants      | -387.59           | -20.61         | -228.38        | -108.33       | -49.12       | -78.94       | -1.43                           | 364.70             | -509.71        |
| CHP plants              | -52.07            | -              | -7.89          | -11.64        | -0.10        | -            | -0.75                           | 30.94              | -41.51         |
| Heat plants             | -7.81             | -              | -0.90          | -0.68         | -            | -            | -0.80                           | 7.11               | -3.08          |
| Blast furnaces          | -65.52            | -              | -2.72          | -             | -            | -            | -                               | -                  | -68.24         |
| Gas works               | 11.02             | -0.60          | -8.72          | -6.37         | -            | -            | -                               | -                  | -4.68          |
| Coke ovens <sup>4</sup> | -25.70            | -              | -0.68          | -0.19         | -            | -            | -0.02                           | -                  | -26.59         |
| Oil refineries          | -                 | -1865.97       | 1868.42        | -             | -            | -            | -                               | -                  | 2.45           |
| Petrochem. plants       | -                 | 4.88           | -5.16          | -             | -            | -            | -                               | -                  | -0.28          |
| Liquefaction plants     | -                 | 0.02           | -              | -             | -            | -            | -                               | -                  | 0.02           |
| Other transf.           | -                 | -              | -0.12          | -0.03         | -            | -            | -                               | -                  | -0.15          |
| Energy ind. own use     | -24.53            | -0.99          | -128.88        | -72.36        | -            | -            | -0.07                           | -33.38             | -260.20        |
| Losses                  | -3.80             | -              | -0.23          | -2.63         | -            | -            | -                               | -30.54             | -37.20         |
| <b>TFC</b>              | <b>303.27</b>     | <b>0.39</b>    | <b>1583.63</b> | <b>498.48</b> | <b>-</b>     | <b>-</b>     | <b>84.30</b>                    | <b>345.49</b>      | <b>2815.56</b> |
| Industry                | 182.79            | 0.39           | 312.91         | 250.44        | -            | -            | 42.26                           | 169.41             | 958.18         |
| Transport               | 7.34              | -              | 665.68         | 17.00         | -            | -            | -                               | 5.30               | 695.32         |
| Other                   | 110.05            | -              | 393.09         | 225.47        | -            | -            | 42.04                           | 170.78             | 941.43         |
| Non-energy use          | 3.10              | -              | 211.95         | 5.58          | -            | -            | -                               | -                  | 220.63         |

1. In this table, peat and oil shale are aggregated with coal.

2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat and electricity trade.

4. Also includes patent fuel, BKB and peat briquette plants.

# Simplified energy balance table

OECD

2014

(Mtoe)

| SUPPLY AND CONSUMPTION  | Coal <sup>1</sup> | Crude oil      | Oil products   | Natural gas    | Nuclear       | Hydro         | Biofuels and waste <sup>2</sup> | Other <sup>3</sup> | Total          |
|-------------------------|-------------------|----------------|----------------|----------------|---------------|---------------|---------------------------------|--------------------|----------------|
| Production              | 976.17            | 1092.20        | -              | 1046.09        | 516.27        | 120.47        | 293.81                          | 98.92              | 4143.93        |
| Imports                 | 405.60            | 1371.96        | 562.67         | 618.98         | -             | -             | 18.06                           | 41.23              | 3018.50        |
| Exports                 | -361.92           | -397.21        | -578.73        | -306.56        | -             | -             | -11.75                          | -40.83             | -1697.00       |
| Intl. marine bunkers    | -                 | -              | -69.87         | -              | -             | -             | -0.08                           | -                  | -69.95         |
| Intl. aviation bunkers  | -                 | -              | -91.47         | -              | -             | -             | -                               | -                  | -91.47         |
| Stock changes           | -7.39             | -5.23          | -3.21          | -14.67         | -             | -             | -0.25                           | -                  | -30.75         |
| <b>TPES</b>             | <b>1012.46</b>    | <b>2061.71</b> | <b>-180.60</b> | <b>1343.84</b> | <b>516.27</b> | <b>120.47</b> | <b>299.79</b>                   | <b>99.32</b>       | <b>5273.27</b> |
| Transfers               | -                 | -80.77         | 96.86          | -              | -             | -             | -                               | -                  | 16.10          |
| Statistical diff.       | -11.23            | 3.13           | 1.02           | 9.67           | -             | -             | 0.27                            | -0.61              | 2.25           |
| Electricity plants      | -725.07           | -5.87          | -44.25         | -364.36        | -509.18       | -120.47       | -47.28                          | 752.11             | -1064.37       |
| CHP plants              | -73.20            | -              | -11.45         | -103.39        | -7.09         | -             | -45.41                          | 141.18             | -99.35         |
| Heat plants             | -4.10             | -              | -1.18          | -7.98          | -             | -             | -6.33                           | 15.49              | -4.11          |
| Blast furnaces          | -55.74            | -              | -0.38          | -0.16          | -             | -             | -                               | -                  | -56.27         |
| Gas works               | -2.08             | -              | -2.41          | 3.45           | -             | -             | -0.07                           | -                  | -1.11          |
| Coke ovens <sup>4</sup> | -7.17             | -              | -1.30          | -0.01          | -             | -             | -0.12                           | -                  | -8.61          |
| Oil refineries          | -                 | -2010.35       | 1986.83        | -              | -             | -             | -                               | -                  | -23.53         |
| Petrochem. plants       | -                 | 28.65          | -29.00         | -              | -             | -             | -                               | -                  | -0.35          |
| Liquefaction plants     | -1.04             | 0.66           | -              | -              | -             | -             | -                               | -                  | -0.39          |
| Other transf.           | -0.20             | 8.65           | -0.00          | -8.61          | -             | -             | -0.23                           | -0.73              | -1.12          |
| Energy ind. own use     | -18.80            | -0.06          | -108.11        | -133.74        | -             | -             | -1.26                           | -74.53             | -336.49        |
| Losses                  | -1.03             | -              | -0.04          | -2.19          | -             | -             | -0.02                           | -63.76             | -67.04         |
| <b>TFC</b>              | <b>112.81</b>     | <b>5.75</b>    | <b>1705.98</b> | <b>736.53</b>  | <b>-</b>      | <b>-</b>      | <b>199.33</b>                   | <b>868.46</b>      | <b>3628.86</b> |
| Industry                | 91.21             | 0.05           | 95.31          | 266.53         | -             | -             | 74.01                           | 281.38             | 808.49         |
| Transport               | 0.01              | -              | 1126.61        | 28.61          | -             | -             | 50.95                           | 8.98               | 1215.16        |
| Other                   | 18.22             | -              | 182.93         | 408.56         | -             | -             | 74.37                           | 578.10             | 1262.19        |
| Non-energy use          | 3.37              | 5.71           | 301.13         | 32.83          | -             | -             | -                               | -                  | 343.03         |

1. In this table, peat and oil shale are aggregated with coal.

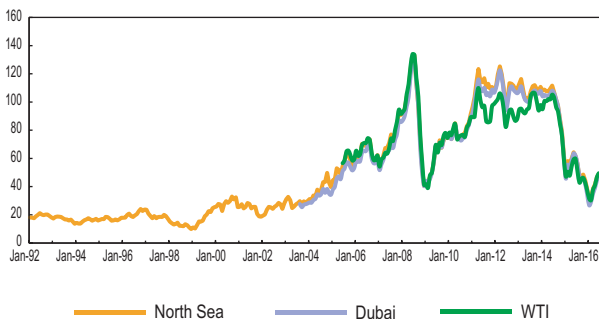
2. Data for biofuels and waste final consumption have been estimated for a number of countries.

3. Includes geothermal, solar, wind, heat and electricity trade.

4. Also includes patent fuel, BKB and peat briquette plants.

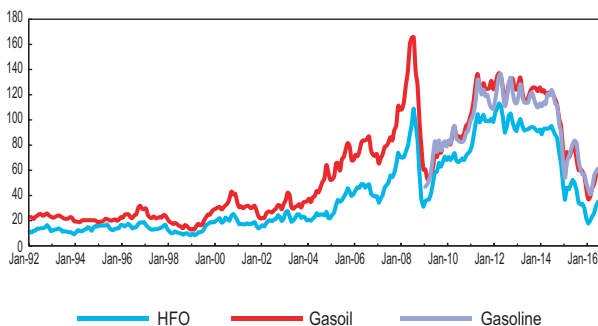
## Crude oil

Average key crude oil spot prices in USD/barrel



## Oil products

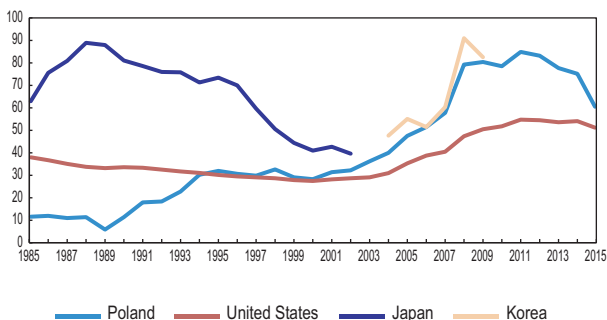
Average Rotterdam oil product spot prices in USD/barrel



Source for all prices: Based on Argus. Copyright  
© 2016 Argus Media Ltd - All rights reserved.

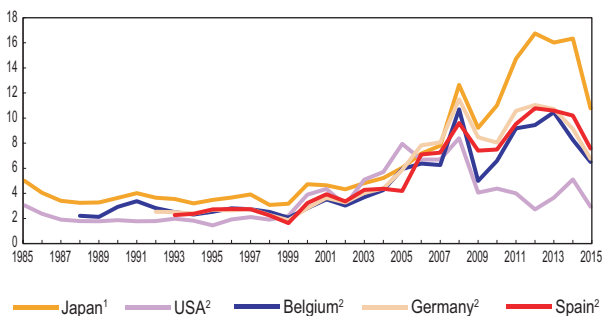
## Coal

Average steam coal prices for electricity generation  
in USD/tonne



## Natural gas

Average natural gas import prices  
in USD/MBtu



1. LNG.  
2. Pipeline.

# Energy prices<sup>1</sup> in selected OECD countries in USD/unit

|                 | Heavy fuel oil<br>for industry <sup>2</sup><br>(tonne) | Light fuel oil<br>for households<br>(1 000 litres) | Automotive<br>diesel oil <sup>3</sup><br>(litre) | Unleaded<br>premium <sup>4</sup><br>(litre) |
|-----------------|--------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|---------------------------------------------|
| Australia       | ..                                                     | ..                                                 | ..                                               | 0.985                                       |
| Austria         | 267.99                                                 | 602.36                                             | 0.641                                            | 1.164                                       |
| Belgium         | 197.66                                                 | 449.69                                             | 0.999                                            | 1.404                                       |
| Canada          | 186.00                                                 | 670.45                                             | ..                                               | 0.766                                       |
| Chile           | ..                                                     | 812.73                                             | ..                                               | 0.992                                       |
| Czech Republic  | 222.26                                                 | 548.52                                             | 0.878                                            | 1.105                                       |
| Denmark         | 414.56                                                 | 1 160.09                                           | 0.962                                            | 1.481                                       |
| Estonia         | ..                                                     | 679.46                                             | 0.886                                            | 1.097                                       |
| Finland         | ..                                                     | 713.66                                             | 1.007                                            | 1.464                                       |
| France          | 300.68                                                 | 628.33                                             | 0.948                                            | 1.388                                       |
| Germany         | 180.15                                                 | 473.71                                             | 0.912                                            | 1.360                                       |
| Greece          | 287.05                                                 | 790.71                                             | 0.887                                            | 1.463                                       |
| Hungary         | 308.79                                                 | x                                                  | 0.850                                            | 1.113                                       |
| Ireland         | 557.30                                                 | 563.37                                             | 0.958                                            | 1.348                                       |
| Israel          | c                                                      | 1 518.80                                           | c                                                | 1.575                                       |
| Italy           | 286.54                                                 | 1 137.12                                           | 1.099                                            | 1.536                                       |
| Japan           | 430.12                                                 | 542.46                                             | 0.720                                            | 0.991                                       |
| Korea           | 365.53                                                 | 646.26                                             | ..                                               | 1.444                                       |
| Luxembourg      | ..                                                     | 422.91                                             | 0.822                                            | 1.141                                       |
| Mexico          | 129.37                                                 | x                                                  | 0.660                                            | 0.774                                       |
| Netherlands     | 452.60                                                 | 911.50                                             | 0.965                                            | 1.555                                       |
| New Zealand     | 233.05                                                 | ..                                                 | 0.391                                            | 1.222                                       |
| Norway          | ..                                                     | 1 008.24                                           | 1.062                                            | 1.528                                       |
| Poland          | 320.29                                                 | 603.75                                             | 0.783                                            | 1.017                                       |
| Portugal        | 513.72                                                 | 984.24                                             | 1.064                                            | 1.459                                       |
| Slovak Republic | 195.93                                                 | ..                                                 | 0.900                                            | 1.283                                       |
| Slovenia        | x                                                      | 737.96                                             | 0.907                                            | 1.265                                       |
| Spain           | 249.71                                                 | 546.44                                             | 0.861                                            | 1.215                                       |
| Sweden          | 764.59                                                 | ..                                                 | 1.179                                            | 1.464                                       |
| Switzerland     | ..                                                     | 636.28                                             | 1.098                                            | 1.341                                       |
| Turkey          | 435.70                                                 | 916.76                                             | 1.191                                            | 1.444                                       |
| United Kingdom  | c                                                      | 509.73                                             | 1.216                                            | 1.454                                       |
| United States   | 216.28                                                 | 544.30                                             | 0.547                                            | 0.567                                       |

1. Prices are for 1st quarter 2016 or latest available quarter for oil products, and annual 2015 for other products.  
2. Low sulphur fuel oil; high sulphur fuel oil for Canada, Ireland, Mexico, New Zealand, Turkey and the United States.

3. For commercial purposes.

4. Unleaded premium gasoline (95 RON); unleaded regular for Japan.

# Energy prices<sup>1</sup> in selected OECD countries in USD/unit

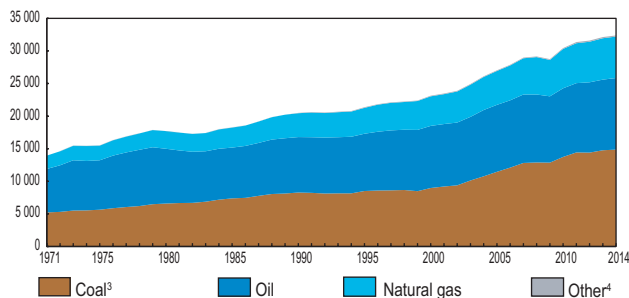
| Nat. gas for industry<br>(MWh GCV <sup>5</sup> ) | Nat. gas for households<br>(MWh GCV <sup>5</sup> ) | Steam coal for industry <sup>6</sup><br>(tonne) | Electricity for industry<br>(MWh) | Electricity for households<br>(MWh) |                 |
|--------------------------------------------------|----------------------------------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------|-----------------|
| ..                                               | ..                                                 | ..                                              | ..                                | 215.79                              | Australia       |
| 41.95                                            | 87.35                                              | 169.79                                          | 108.61                            | 221.51                              | Austria         |
| 28.29                                            | 66.83                                              | ..                                              | 106.93                            | 226.90                              | Belgium         |
| 10.16                                            | 26.84                                              | ..                                              | 75.65                             | 107.17                              | Canada          |
| ..                                               | 83.89                                              | ..                                              | 114.64                            | 157.85                              | Chile           |
| 33.71                                            | 66.97                                              | c                                               | 97.69                             | 146.59                              | Czech Republic  |
| ..                                               | 87.56                                              | ..                                              | 85.79                             | 337.38                              | Denmark         |
| 33.61                                            | 46.00                                              | ..                                              | 98.00                             | 139.43                              | Estonia         |
| 41.30                                            | ..                                                 | 245.73                                          | 84.47                             | 168.91                              | Finland         |
| 40.50                                            | 74.63                                              | ..                                              | 110.13                            | 181.48                              | France          |
| 34.12                                            | 78.35                                              | ..                                              | 145.09                            | 327.07                              | Germany         |
| 36.92                                            | 112.67                                             | ..                                              | 105.32                            | 196.23                              | Greece          |
| 34.24                                            | 39.86                                              | ..                                              | 99.72                             | 128.14                              | Hungary         |
| 35.88                                            | 80.48                                              | ..                                              | 132.37                            | 252.37                              | Ireland         |
| c                                                | x                                                  | x                                               | 91.02                             | 146.41                              | Israel          |
| ..                                               | ..                                                 | ..                                              | ..                                | ..                                  | Italy           |
| ..                                               | ..                                                 | 96.51                                           | 161.99                            | 225.12                              | Japan           |
| 53.22                                            | 58.30                                              | ..                                              | ..                                | 102.71                              | Korea           |
| 42.36                                            | 53.80                                              | x                                               | 71.88                             | 188.57                              | Luxembourg      |
| ..                                               | 27.19                                              | x                                               | 81.69                             | 75.33                               | Mexico          |
| 31.56                                            | 82.06                                              | ..                                              | 88.46                             | 206.90                              | Netherlands     |
| 17.67                                            | 92.63                                              | c                                               | ..                                | 195.59                              | New Zealand     |
| x                                                | x                                                  | ..                                              | 35.34                             | 94.52                               | Norway          |
| 31.84                                            | 59.62                                              | 70.09                                           | 89.69                             | 163.80                              | Poland          |
| 44.10                                            | 108.59                                             | 109.20                                          | 127.23                            | 253.13                              | Portugal        |
| 36.28                                            | 58.02                                              | ..                                              | 130.79                            | 171.20                              | Slovak Republic |
| 37.96                                            | 69.56                                              | c                                               | 88.08                             | 176.26                              | Slovenia        |
| 33.23                                            | 97.44                                              | ..                                              | ..                                | ..                                  | Spain           |
| 44.42                                            | 127.85                                             | ..                                              | 58.80                             | 170.59                              | Sweden          |
| 65.76                                            | 100.54                                             | 98.72                                           | 122.42                            | 205.94                              | Switzerland     |
| 32.60                                            | 40.77                                              | 80.75                                           | 111.99                            | 145.27                              | Turkey          |
| 33.27                                            | 75.00                                              | 137.60                                          | 143.04                            | 236.95                              | United Kingdom  |
| 12.67                                            | 34.22                                              | 75.21                                           | 68.95                             | 126.71                              | United States   |

5. Gross calorific value. 6. Brown coal for Turkey.

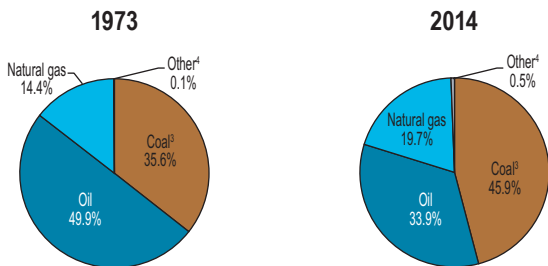
.. not available x not applicable c confidential

## CO<sub>2</sub> Emissions by fuel

World<sup>1</sup> CO<sub>2</sub> emissions from fuel combustion<sup>2</sup>  
from 1971 to 2014 by fuel (Mt of CO<sub>2</sub>)



1973 and 2014 fuel shares of CO<sub>2</sub> emissions  
from fuel combustion<sup>2</sup>



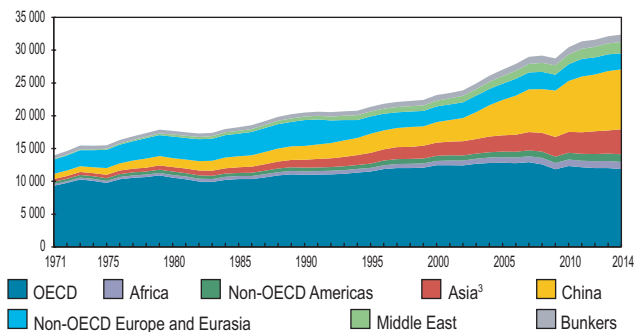
**15 458 Mt of CO<sub>2</sub>**

**32 381 Mt of CO<sub>2</sub>**

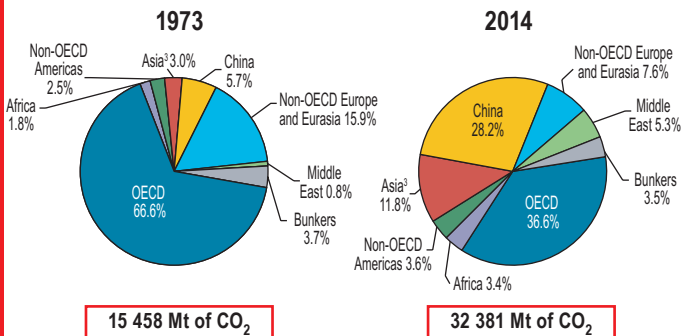
1. World includes international aviation and international marine bunkers.
2. CO<sub>2</sub> emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.
3. In these graphs, peat and oil shale are aggregated with coal.
4. Includes industrial waste and non-renewable municipal waste.

## CO<sub>2</sub> Emissions by region

World<sup>1</sup> CO<sub>2</sub> emissions from fuel combustion<sup>2</sup>  
from 1971 to 2014 by region (Mt of CO<sub>2</sub>)



1973 and 2014 regional shares of  
CO<sub>2</sub> emissions from fuel combustion<sup>2</sup>

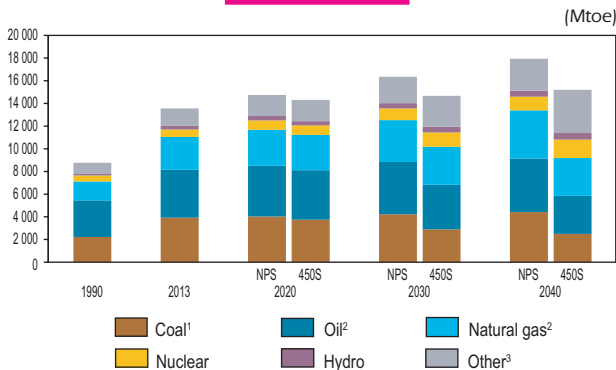


1. World includes international aviation and marine bunkers, which are shown together as Bunkers.
2. CO<sub>2</sub> emissions from fuel combustion are based on the IEA energy balances and on the 2006 IPCC Guidelines, excluding emissions from non-energy.
3. Asia excludes China and OECD countries of Asia.

# Outlook for world TPES

(Source: IEA, World Energy Outlook 2015)

## TPES Outlook by fuel to 2040

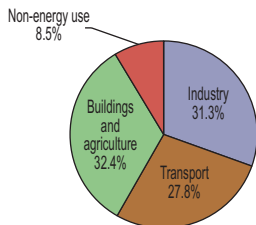


NPS: New Policies Scenario  
(based on policies under consideration)

450S: 450 Scenario<sup>4</sup>  
(based on policies needed to limit global average temperature increase to 2 °C)

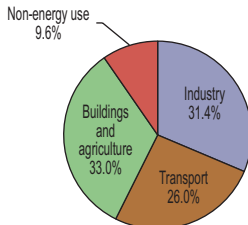
## Total final consumption by sector in 2040

### New Policies Scenario



**12 244 Mtoe**

### 450 Scenario



**10 551 Mtoe**

1. In these graphs, peat and oil shale are aggregated with coal.

2. Includes international aviation and marine bunkers.

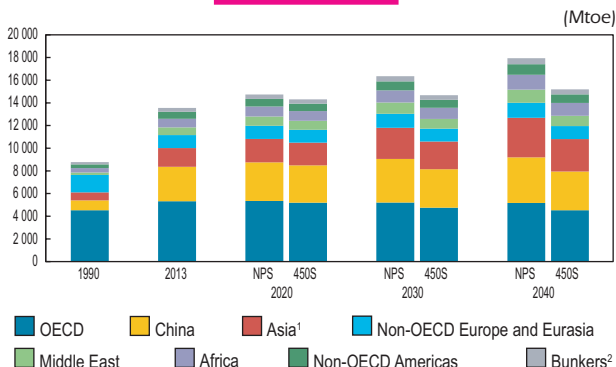
3. Includes biofuels and waste, geothermal, solar, wind, tide, etc.

4. Based on a plausible post-2015 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO<sub>2</sub>-equivalent.

# Outlook for world TPES

(Source: IEA, World Energy Outlook 2015)

## TPES Outlook by region to 2040

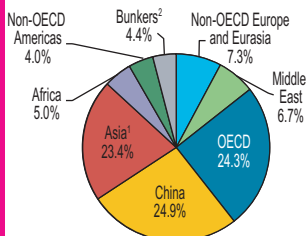


NPS: New Policies Scenario  
(based on policies under consideration)

450S: 450 Scenario³  
(based on policies needed to limit global average temperature increase to 2 °C)

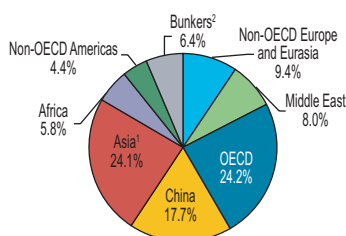
## CO<sub>2</sub> emissions by region in 2040

### New Policies Scenario



**36 673 Mt of CO<sub>2</sub>**

### 450 Scenario



**18 777 Mt of CO<sub>2</sub>**

1. Asia excludes China and OECD countries of Asia.
2. Includes international aviation and international marine bunkers.
3. Based on a plausible post-2015 climate-policy framework to stabilise the long-term concentration of global greenhouse gases at 450 ppm CO<sub>2</sub>-equivalent.  
CO<sub>2</sub> emissions are from fossil fuel combustion only.

# Selected indicators for 2014

(alphabetical order)

| Region/<br>Country/<br>Economy | Popu-<br>lation<br>(million) | GDP<br>(billion<br>2010 USD) | GDP<br>(PPP)<br>(billion<br>2010 USD) | Energy<br>prod.<br>(Mtoe) | Net<br>imports<br>(Mtoe) | TPES<br>(Mtoe)       | Elec.<br>cons. <sup>1</sup><br>(TWh) | CO <sub>2</sub><br>emissions <sup>2</sup><br>(Mt<br>of CO <sub>2</sub> ) |
|--------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------|--------------------------|----------------------|--------------------------------------|--------------------------------------------------------------------------|
| World                          | 7249                         | 72874                        | 101390                                | 13805                     | -                        | 13699 <sup>(a)</sup> | 21963                                | 32381 <sup>(4)</sup>                                                     |
| OECD                           | 1267                         | 47107                        | 46238                                 | 4144                      | 1322                     | 5273                 | 10171                                | 11856                                                                    |
| Middle East                    | 224                          | 2190                         | 4946                                  | 1807                      | -1050                    | 721                  | 875                                  | 1728                                                                     |
| Non-OECD Europe and Eurasia    | 343                          | 2700                         | 5461                                  | 1819                      | -665                     | 1124                 | 1557                                 | 2446                                                                     |
| China                          | 1372                         | 8488                         | 17214                                 | 2593                      | 535                      | 3066                 | 5402                                 | 9135                                                                     |
| Asia                           | 2408                         | 5685                         | 15871                                 | 1496                      | 317                      | 1741                 | 2280                                 | 3807                                                                     |
| Non-OECD Americas              | 480                          | 4480                         | 6528                                  | 817                       | -152                     | 639                  | 1021                                 | 1174                                                                     |
| Africa                         | 1156                         | 2223                         | 5131                                  | 1129                      | -338                     | 772                  | 657                                  | 1105                                                                     |
| Albania                        | 2.89                         | 12.82                        | 29.12                                 | 2.01                      | 0.67                     | 2.34                 | 6.67                                 | 4.12                                                                     |
| Algeria                        | 38.93                        | 182.67                       | 516.54                                | 143.20                    | -89.74                   | 51.67                | 53.05                                | 122.93                                                                   |
| Angola                         | 24.23                        | 97.50                        | 133.79                                | 94.05                     | -78.59                   | 14.67                | 8.41                                 | 19.30                                                                    |
| Argentina                      | 42.98                        | 521.27                       | 807.82                                | 75.33                     | 13.57                    | 86.62                | 131.20                               | 192.41                                                                   |
| Armenia                        | 3.01                         | 11.11                        | 22.68                                 | 0.85                      | 2.15                     | 2.96                 | 5.71                                 | 5.22                                                                     |
| Australia                      | 23.64                        | 1438.97                      | 1043.89                               | 365.71                    | -235.04                  | 125.24               | 236.43                               | 373.78                                                                   |
| Austria                        | 8.54                         | 406.94                       | 365.39                                | 12.09                     | 21.66                    | 32.16                | 71.41                                | 60.78                                                                    |
| Azerbaijan                     | 9.54                         | 58.38                        | 156.16                                | 58.78                     | -44.25                   | 14.32                | 21.00                                | 30.79                                                                    |
| Bahrain                        | 1.36                         | 29.95                        | 57.92                                 | 22.88                     | -8.36                    | 14.16                | 26.18                                | 29.69                                                                    |
| Bangladesh                     | 159.08                       | 147.00                       | 464.33                                | 29.46                     | 6.10                     | 35.42                | 49.48                                | 62.27                                                                    |
| Belarus                        | 9.47                         | 60.88                        | 160.97                                | 3.67                      | 24.31                    | 27.75                | 34.87                                | 57.43                                                                    |
| Belgium                        | 11.16                        | 499.42                       | 441.78                                | 12.53                     | 47.50                    | 52.77                | 86.41                                | 87.36                                                                    |
| Benin                          | 10.60                        | 8.55                         | 20.11                                 | 2.29                      | 2.20                     | 4.29                 | 1.03                                 | 5.74                                                                     |
| Bolivia                        | 10.56                        | 24.48                        | 65.45                                 | 23.16                     | -14.78                   | 8.33                 | 7.95                                 | 18.30                                                                    |
| Bosnia and Herzegovina         | 3.82                         | 17.76                        | 35.48                                 | 6.05                      | 1.71                     | 7.82                 | 12.00                                | 21.62                                                                    |
| Botswana                       | 2.22                         | 16.23                        | 33.41                                 | 1.51                      | 1.06                     | 2.72                 | 3.79                                 | 6.88                                                                     |
| Brazil                         | 206.08                       | 2412.23                      | 3061.43                               | 267.25                    | 42.78                    | 303.24               | 531.23                               | 476.02                                                                   |
| Brunei Darussalam              | 0.42                         | 12.39                        | 27.77                                 | 16.26                     | -12.49                   | 3.55                 | 4.22                                 | 6.70                                                                     |

1. Gross production + imports – exports – losses.

2. CO<sub>2</sub> emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

# Selected indicators for 2014 (continued)

| TPES/<br>pop.<br>(toe/capita) | TPES/<br>GDP<br>(toe/000<br>2010 USD) | TPES/<br>GDP (PPP)<br>(toe/000<br>2010 USD) | Elec.<br>cons./pop.<br>(kWh/<br>capita) | CO <sub>2</sub> /<br>TPES<br>(t CO <sub>2</sub> /<br>toe) | CO <sub>2</sub> /<br>pop.<br>(t CO <sub>2</sub> /<br>capita) | CO <sub>2</sub> /<br>GDP<br>(kg CO <sub>2</sub> /<br>2010 USD) | CO <sub>2</sub> /<br>GDP (PPP)<br>(kg CO <sub>2</sub> /<br>2010 USD) | Region/<br>Country/<br>Economy |
|-------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| 1.89                          | 0.19                                  | 0.14                                        | 3030                                    | 2.36                                                      | 4.47                                                         | 0.44                                                           | 0.32                                                                 | World                          |
| 4.16                          | 0.11                                  | 0.11                                        | 8028                                    | 2.25                                                      | 9.36                                                         | 0.25                                                           | 0.26                                                                 | OECD                           |
| 3.22                          | 0.33                                  | 0.15                                        | 3909                                    | 2.40                                                      | 7.72                                                         | 0.79                                                           | 0.35                                                                 | Middle East                    |
| 3.28                          | 0.42                                  | 0.21                                        | 4543                                    | 2.18                                                      | 7.14                                                         | 0.91                                                           | 0.45                                                                 | Non-OECD Europe and Eurasia    |
| 2.24                          | 0.36                                  | 0.18                                        | 3938                                    | 2.98                                                      | 6.66                                                         | 1.08                                                           | 0.53                                                                 | China                          |
| 0.72                          | 0.31                                  | 0.11                                        | 947                                     | 2.19                                                      | 1.58                                                         | 0.67                                                           | 0.24                                                                 | Asia                           |
| 1.33                          | 0.14                                  | 0.10                                        | 2125                                    | 1.84                                                      | 2.44                                                         | 0.26                                                           | 0.18                                                                 | Non-OECD Americas              |
| 0.67                          | 0.35                                  | 0.15                                        | 568                                     | 1.43                                                      | 0.96                                                         | 0.50                                                           | 0.22                                                                 | Africa                         |
| 0.81                          | 0.18                                  | 0.08                                        | 2305                                    | 1.76                                                      | 1.42                                                         | 0.32                                                           | 0.14                                                                 | Albania                        |
| 1.33                          | 0.28                                  | 0.10                                        | 1363                                    | 2.38                                                      | 3.16                                                         | 0.67                                                           | 0.24                                                                 | Algeria                        |
| 0.61                          | 0.15                                  | 0.11                                        | 347                                     | 1.32                                                      | 0.80                                                         | 0.20                                                           | 0.14                                                                 | Angola                         |
| 2.02                          | 0.17                                  | 0.11                                        | 3052                                    | 2.22                                                      | 4.48                                                         | 0.37                                                           | 0.24                                                                 | Argentina                      |
| 0.98                          | 0.27                                  | 0.13                                        | 1901                                    | 1.76                                                      | 1.74                                                         | 0.47                                                           | 0.23                                                                 | Armenia                        |
| 5.30                          | 0.09                                  | 0.12                                        | 10002                                   | 2.98                                                      | 15.81                                                        | 0.26                                                           | 0.36                                                                 | Australia                      |
| 3.76                          | 0.08                                  | 0.09                                        | 8358                                    | 1.89                                                      | 7.11                                                         | 0.15                                                           | 0.17                                                                 | Austria                        |
| 1.50                          | 0.25                                  | 0.09                                        | 2202                                    | 2.15                                                      | 3.23                                                         | 0.53                                                           | 0.20                                                                 | Azerbaijan                     |
| 10.39                         | 0.47                                  | 0.24                                        | 19224                                   | 2.10                                                      | 21.80                                                        | 0.99                                                           | 0.51                                                                 | Bahrain                        |
| 0.22                          | 0.24                                  | 0.08                                        | 311                                     | 1.76                                                      | 0.39                                                         | 0.42                                                           | 0.13                                                                 | Bangladesh                     |
| 2.93                          | 0.46                                  | 0.17                                        | 3682                                    | 2.07                                                      | 6.06                                                         | 0.94                                                           | 0.36                                                                 | Belarus                        |
| 4.73                          | 0.11                                  | 0.12                                        | 7745                                    | 1.66                                                      | 7.83                                                         | 0.17                                                           | 0.20                                                                 | Belgium                        |
| 0.40                          | 0.50                                  | 0.21                                        | 97                                      | 1.34                                                      | 0.54                                                         | 0.67                                                           | 0.29                                                                 | Benin                          |
| 0.79                          | 0.34                                  | 0.13                                        | 753                                     | 2.20                                                      | 1.73                                                         | 0.75                                                           | 0.28                                                                 | Bolivia                        |
| 2.05                          | 0.44                                  | 0.22                                        | 3144                                    | 2.76                                                      | 5.66                                                         | 1.22                                                           | 0.61                                                                 | Bosnia and Herzegovina         |
| 1.22                          | 0.17                                  | 0.08                                        | 1708                                    | 2.53                                                      | 3.10                                                         | 0.42                                                           | 0.21                                                                 | Botswana                       |
| 1.47                          | 0.13                                  | 0.10                                        | 2578                                    | 1.57                                                      | 2.31                                                         | 0.20                                                           | 0.16                                                                 | Brazil                         |
| 8.52                          | 0.29                                  | 0.13                                        | 10113                                   | 1.88                                                      | 16.06                                                        | 0.54                                                           | 0.24                                                                 | Brunei Darussalam              |

3. TPES for world includes international aviation and international marine bunkers as well as electricity and heat trade.

4. CO<sub>2</sub> emissions for world include emissions from international aviation and international marine bunkers.

## Selected indicators for 2014 (continued)

| Region/<br>Country/<br>Economy | Popu-<br>lation<br>(million) | GDP<br>(billion<br>2010 USD) | GDP<br>(PPP)<br>(billion<br>2010 USD) | Energy<br>prod.<br>(Mtoe) | Net<br>imports<br>(Mtoe) | TPES<br>(Mtoe) | Elec.<br>cons. <sup>1</sup><br>(TWh) | CO <sub>2</sub><br>emissions <sup>2</sup><br>(Mt<br>of CO <sub>2</sub> ) |
|--------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------|--------------------------|----------------|--------------------------------------|--------------------------------------------------------------------------|
| Bulgaria                       | 7.22                         | 52.30                        | 116.83                                | 11.36                     | 6.45                     | 17.90          | 34.02                                | 42.13                                                                    |
| Cambodia                       | 15.33                        | 14.86                        | 46.75                                 | 4.26                      | 2.18                     | 6.37           | 4.15                                 | 6.10                                                                     |
| Cameroon                       | 22.77                        | 28.77                        | 63.27                                 | 9.76                      | -2.02                    | 7.60           | 6.24                                 | 6.04                                                                     |
| Canada                         | 35.54                        | 1773.55                      | 1497.77                               | 469.99                    | -184.87                  | 279.88         | 552.42                               | 554.80                                                                   |
| Chile                          | 17.84                        | 257.20                       | 367.13                                | 12.92                     | 24.29                    | 36.10          | 68.90                                | 75.81                                                                    |
| China (People's Rep. of)       | 1364.27                      | 8230.12                      | 16840.98                              | 2593.11                   | 507.94                   | 3051.50        | 5357.55                              | 9086.96                                                                  |
| Colombia                       | 47.79                        | 349.22                       | 596.69                                | 127.23                    | -88.27                   | 34.01          | 61.63                                | 72.50                                                                    |
| Republic of Congo              | 4.51                         | 14.24                        | 26.43                                 | 15.68                     | -12.67                   | 2.63           | 0.96                                 | 2.64                                                                     |
| Costa Rica                     | 4.76                         | 42.72                        | 66.34                                 | 2.46                      | 2.63                     | 4.91           | 9.32                                 | 7.17                                                                     |
| Côte d'Ivoire                  | 22.16                        | 31.23                        | 67.48                                 | 12.89                     | 1.04                     | 13.87          | 6.22                                 | 9.35                                                                     |
| Croatia                        | 4.24                         | 57.38                        | 80.63                                 | 4.35                      | 3.62                     | 8.04           | 15.74                                | 15.14                                                                    |
| Cuba                           | 11.38                        | 72.47                        | 230.10                                | 5.88                      | 6.66                     | 11.70          | 16.41                                | 29.45                                                                    |
| Curaçao                        | 0.16                         | 1.88                         | 1.69                                  | 0.00                      | 3.61                     | 1.97           | 0.75                                 | 4.75                                                                     |
| Cyprus <sup>5</sup>            | 0.86                         | 22.86                        | 25.50                                 | 0.12                      | 2.28                     | 1.97           | 4.18                                 | 5.76                                                                     |
| Czech Republic                 | 10.53                        | 212.20                       | 290.64                                | 29.26                     | 12.53                    | 41.21          | 65.88                                | 96.55                                                                    |
| DPR of Korea                   | 25.03                        | 38.15                        | 143.19                                | 20.82                     | -8.90                    | 11.91          | 15.08                                | 37.80                                                                    |
| Dem. Rep. of the Congo         | 74.88                        | 27.81                        | 52.20                                 | 28.16                     | 0.80                     | 28.72          | 8.01                                 | 4.66                                                                     |
| Denmark                        | 5.64                         | 326.54                       | 236.98                                | 16.06                     | 2.20                     | 16.21          | 33.06                                | 34.51                                                                    |
| Dominican Republic             | 10.41                        | 63.93                        | 129.00                                | 1.02                      | 7.06                     | 7.64           | 16.42                                | 19.26                                                                    |
| Ecuador                        | 15.90                        | 85.92                        | 169.04                                | 30.45                     | -15.35                   | 14.18          | 21.96                                | 38.73                                                                    |
| Egypt                          | 89.58                        | 237.74                       | 881.94                                | 80.36                     | -4.41                    | 74.83          | 152.20                               | 173.27                                                                   |
| El Salvador                    | 6.11                         | 23.16                        | 47.68                                 | 2.06                      | 2.15                     | 4.07           | 5.90                                 | 5.88                                                                     |
| Eritrea                        | 5.11                         | 2.55                         | 7.33                                  | 0.63                      | 0.18                     | 0.81           | 0.32                                 | 0.56                                                                     |
| Estonia                        | 1.32                         | 23.07                        | 33.25                                 | 5.83                      | 0.68                     | 6.04           | 8.85                                 | 17.52                                                                    |
| Ethiopia                       | 96.96                        | 44.09                        | 135.92                                | 45.51                     | 3.31                     | 48.37          | 6.79                                 | 9.13                                                                     |
| Finland                        | 5.46                         | 246.91                       | 204.80                                | 18.26                     | 16.96                    | 33.93          | 83.29                                | 45.25                                                                    |
| FYR of Macedonia               | 2.08                         | 10.21                        | 26.14                                 | 1.27                      | 1.38                     | 2.62           | 7.27                                 | 7.43                                                                     |
| France                         | 66.17                        | 2729.47                      | 2406.79                               | 137.13                    | 114.24                   | 242.64         | 460.20                               | 285.68                                                                   |
| Gabon                          | 1.69                         | 17.84                        | 30.65                                 | 15.91                     | -10.58                   | 5.08           | 2.20                                 | 3.49                                                                     |
| Georgia                        | 4.50                         | 14.34                        | 31.92                                 | 1.37                      | 3.10                     | 4.39           | 10.02                                | 7.72                                                                     |
| Germany                        | 80.98                        | 3624.17                      | 3438.04                               | 119.75                    | 196.49                   | 306.07         | 569.75                               | 723.27                                                                   |

1. Gross production + imports – exports – losses.

2. CO<sub>2</sub> emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

## Selected indicators for 2014 (continued)

| TPES/<br>pop.<br>(toe/capita) | TPES/<br>GDP<br>(toe/000<br>2010 USD) | TPES/<br>GDP (PPP)<br>(toe/000<br>2010 USD) | Elec.<br>cons./pop.<br>(kWh/<br>capita) | CO <sub>2</sub> /<br>TPES<br>(t CO <sub>2</sub> /<br>toe) | CO <sub>2</sub> /<br>pop.<br>(t CO <sub>2</sub> /<br>capita) | CO <sub>2</sub> /<br>GDP<br>(kg CO <sub>2</sub> /<br>2010 USD) | CO <sub>2</sub> /<br>GDP (PPP)<br>(kg CO <sub>2</sub> /<br>2010 USD) | Region/<br>Country/<br>Economy |
|-------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| 2.48                          | 0.34                                  | 0.15                                        | 4709                                    | 2.35                                                      | 5.83                                                         | 0.81                                                           | 0.36                                                                 | Bulgaria                       |
| 0.42                          | 0.43                                  | 0.14                                        | 270                                     | 0.96                                                      | 0.40                                                         | 0.41                                                           | 0.13                                                                 | Cambodia                       |
| 0.33                          | 0.26                                  | 0.12                                        | 274                                     | 0.79                                                      | 0.27                                                         | 0.21                                                           | 0.10                                                                 | Cameroon                       |
| 7.88                          | 0.16                                  | 0.19                                        | 15544                                   | 1.98                                                      | 15.61                                                        | 0.31                                                           | 0.37                                                                 | Canada                         |
| 2.02                          | 0.14                                  | 0.10                                        | 3863                                    | 2.10                                                      | 4.25                                                         | 0.29                                                           | 0.21                                                                 | Chile                          |
| 2.24                          | 0.37                                  | 0.18                                        | 3927                                    | 2.98                                                      | 6.66                                                         | 1.10                                                           | 0.54                                                                 | China (People's Rep. of)       |
| 0.71                          | 0.10                                  | 0.06                                        | 1290                                    | 2.13                                                      | 1.52                                                         | 0.21                                                           | 0.12                                                                 | Colombia                       |
| 0.58                          | 0.18                                  | 0.10                                        | 213                                     | 1.00                                                      | 0.59                                                         | 0.19                                                           | 0.10                                                                 | Republic of Congo              |
| 1.03                          | 0.11                                  | 0.07                                        | 1958                                    | 1.46                                                      | 1.51                                                         | 0.17                                                           | 0.11                                                                 | Costa Rica                     |
| 0.63                          | 0.44                                  | 0.21                                        | 281                                     | 0.67                                                      | 0.42                                                         | 0.30                                                           | 0.14                                                                 | Côte d'Ivoire                  |
| 1.90                          | 0.14                                  | 0.10                                        | 3715                                    | 1.88                                                      | 3.57                                                         | 0.26                                                           | 0.19                                                                 | Croatia                        |
| 1.03                          | 0.16                                  | 0.05                                        | 1442                                    | 2.52                                                      | 2.59                                                         | 0.41                                                           | 0.13                                                                 | Cuba                           |
| 12.64                         | 1.05                                  | 1.17                                        | 4795                                    | 2.41                                                      | 30.43                                                        | 2.53                                                           | 2.82                                                                 | Curaçao                        |
| 2.30                          | 0.09                                  | 0.08                                        | 4868                                    | 2.92                                                      | 6.72                                                         | 0.25                                                           | 0.23                                                                 | Cyprus <sup>5</sup>            |
| 3.92                          | 0.19                                  | 0.14                                        | 6259                                    | 2.34                                                      | 9.17                                                         | 0.46                                                           | 0.33                                                                 | Czech Republic                 |
| 0.48                          | 0.31                                  | 0.08                                        | 602                                     | 3.17                                                      | 1.51                                                         | 0.99                                                           | 0.26                                                                 | DPR of Korea                   |
| 0.38                          | 1.03                                  | 0.55                                        | 107                                     | 0.16                                                      | 0.06                                                         | 0.17                                                           | 0.09                                                                 | Dem. Rep. of the Congo         |
| 2.87                          | 0.05                                  | 0.07                                        | 5859                                    | 2.13                                                      | 6.12                                                         | 0.11                                                           | 0.15                                                                 | Denmark                        |
| 0.73                          | 0.12                                  | 0.06                                        | 1578                                    | 2.52                                                      | 1.85                                                         | 0.30                                                           | 0.15                                                                 | Dominican Republic             |
| 0.89                          | 0.17                                  | 0.08                                        | 1381                                    | 2.73                                                      | 2.44                                                         | 0.45                                                           | 0.23                                                                 | Ecuador                        |
| 0.84                          | 0.31                                  | 0.08                                        | 1699                                    | 2.32                                                      | 1.93                                                         | 0.73                                                           | 0.20                                                                 | Egypt                          |
| 0.67                          | 0.18                                  | 0.09                                        | 966                                     | 1.44                                                      | 0.96                                                         | 0.25                                                           | 0.12                                                                 | El Salvador                    |
| 0.16                          | 0.32                                  | 0.11                                        | 63                                      | 0.69                                                      | 0.11                                                         | 0.22                                                           | 0.08                                                                 | Eritrea                        |
| 4.59                          | 0.26                                  | 0.18                                        | 6725                                    | 2.90                                                      | 13.31                                                        | 0.76                                                           | 0.53                                                                 | Estonia                        |
| 0.50                          | 1.10                                  | 0.36                                        | 70                                      | 0.19                                                      | 0.09                                                         | 0.21                                                           | 0.07                                                                 | Ethiopia                       |
| 6.21                          | 0.14                                  | 0.17                                        | 15246                                   | 1.33                                                      | 8.28                                                         | 0.18                                                           | 0.22                                                                 | Finland                        |
| 1.26                          | 0.26                                  | 0.10                                        | 3500                                    | 2.83                                                      | 3.58                                                         | 0.73                                                           | 0.28                                                                 | FYR of Macedonia               |
| 3.67                          | 0.09                                  | 0.10                                        | 6955                                    | 1.18                                                      | 4.32                                                         | 0.10                                                           | 0.12                                                                 | France                         |
| 3.01                          | 0.28                                  | 0.17                                        | 1303                                    | 0.69                                                      | 2.07                                                         | 0.20                                                           | 0.11                                                                 | Gabon                          |
| 0.97                          | 0.31                                  | 0.14                                        | 2225                                    | 1.76                                                      | 1.71                                                         | 0.54                                                           | 0.24                                                                 | Georgia                        |
| 3.78                          | 0.08                                  | 0.09                                        | 7035                                    | 2.36                                                      | 8.93                                                         | 0.20                                                           | 0.21                                                                 | Germany                        |

5. Please refer to geographical coverage section for more details.

## Selected indicators for 2014 (continued)

| Region/<br>Country/<br>Economy | Popu-<br>lation<br>(million) | GDP<br>(billion<br>2010 USD) | GDP<br>(PPP)<br>(billion<br>2010 USD) | Energy<br>prod.<br>(Mtoe) | Net<br>imports<br>(Mtoe) | TPES<br>(Mtoe) | Elec.<br>cons. <sup>1</sup><br>(TWh) | CO <sub>2</sub><br>emissions <sup>2</sup><br>(Mt<br>of CO <sub>2</sub> ) |
|--------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------|--------------------------|----------------|--------------------------------------|--------------------------------------------------------------------------|
| Ghana                          | 26.79                        | 44.75                        | 102.20                                | 9.77                      | -0.64                    | 9.03           | 9.56                                 | 13.11                                                                    |
| Gibraltar                      | 0.03                         | 1.14                         | 0.98                                  | 0.00                      | 3.02                     | 0.20           | 0.19                                 | 0.54                                                                     |
| Greece                         | 10.93                        | 245.70                       | 264.53                                | 8.80                      | 16.93                    | 23.13          | 55.14                                | 65.88                                                                    |
| Guatemala                      | 16.02                        | 47.93                        | 111.59                                | 8.88                      | 4.35                     | 13.22          | 9.20                                 | 16.14                                                                    |
| Haiti                          | 10.57                        | 7.70                         | 17.11                                 | 3.24                      | 0.94                     | 4.15           | 0.41                                 | 2.76                                                                     |
| Honduras                       | 7.96                         | 18.15                        | 36.53                                 | 2.52                      | 2.69                     | 5.35           | 5.55                                 | 8.75                                                                     |
| Hong Kong, China               | 7.24                         | 257.49                       | 372.87                                | 0.19                      | 27.48                    | 14.25          | 43.98                                | 47.94                                                                    |
| Hungary                        | 9.87                         | 137.47                       | 228.01                                | 10.14                     | 14.19                    | 22.84          | 39.13                                | 40.28                                                                    |
| Iceland                        | 0.33                         | 14.45                        | 13.41                                 | 5.22                      | 0.84                     | 5.87           | 17.62                                | 2.04                                                                     |
| India                          | 1295.29                      | 2195.65                      | 6902.09                               | 541.81                    | 289.72                   | 824.74         | 1042.33                              | 2019.67                                                                  |
| Indonesia                      | 254.46                       | 942.54                       | 2501.42                               | 458.00                    | -231.45                  | 225.51         | 207.14                               | 436.53                                                                   |
| Islamic Rep. of Iran           | 78.14                        | 463.90                       | 1263.83                               | 316.25                    | -75.32                   | 237.08         | 234.11                               | 556.09                                                                   |
| Iraq                           | 34.81                        | 177.05                       | 489.96                                | 162.99                    | -111.28                  | 49.48          | 45.71                                | 141.03                                                                   |
| Ireland                        | 4.62                         | 241.27                       | 216.23                                | 2.01                      | 11.66                    | 12.77          | 26.42                                | 33.86                                                                    |
| Israel                         | 8.21                         | 268.11                       | 252.10                                | 7.48                      | 16.53                    | 22.70          | 54.23                                | 64.69                                                                    |
| Italy                          | 60.80                        | 2033.75                      | 1969.37                               | 36.69                     | 115.06                   | 146.77         | 304.09                               | 319.71                                                                   |
| Jamaica                        | 2.72                         | 13.50                        | 22.58                                 | 0.50                      | 2.68                     | 2.81           | 3.02                                 | 7.17                                                                     |
| Japan                          | 127.12                       | 5642.89                      | 4437.13                               | 26.59                     | 422.27                   | 441.74         | 995.26                               | 1188.63                                                                  |
| Jordan                         | 6.61                         | 29.49                        | 74.42                                 | 0.26                      | 8.37                     | 8.18           | 16.63                                | 24.11                                                                    |
| Kazakhstan                     | 17.29                        | 184.93                       | 391.54                                | 166.28                    | -89.01                   | 76.67          | 96.82                                | 223.69                                                                   |
| Kenya                          | 44.86                        | 49.40                        | 123.88                                | 19.57                     | 4.60                     | 23.63          | 7.67                                 | 12.35                                                                    |
| Korea                          | 50.42                        | 1233.97                      | 1697.11                               | 49.11                     | 232.84                   | 268.41         | 532.66                               | 567.81                                                                   |
| Kosovo                         | 1.82                         | 6.57                         | 15.53                                 | 1.61                      | 0.60                     | 2.21           | 5.11                                 | 7.40                                                                     |
| Kuwait                         | 3.75                         | 136.19                       | 256.96                                | 166.36                    | -131.14                  | 33.88          | 57.54                                | 86.08                                                                    |
| Kyrgyzstan                     | 5.83                         | 5.83                         | 18.12                                 | 1.91                      | 2.15                     | 3.80           | 11.33                                | 8.36                                                                     |
| Latvia <sup>5</sup>            | 1.99                         | 27.66                        | 42.54                                 | 2.38                      | 1.90                     | 4.34           | 6.99                                 | 6.72                                                                     |
| Lebanon                        | 4.55                         | 40.78                        | 74.21                                 | 0.16                      | 7.61                     | 7.49           | 16.21                                | 22.37                                                                    |
| Libya                          | 6.26                         | 38.10                        | 91.25                                 | 36.27                     | -16.39                   | 17.87          | 11.52                                | 47.90                                                                    |
| Lithuania                      | 2.93                         | 43.62                        | 73.08                                 | 1.75                      | 5.35                     | 7.00           | 11.21                                | 10.31                                                                    |
| Luxembourg                     | 0.56                         | 57.81                        | 47.36                                 | 0.15                      | 4.08                     | 3.82           | 7.74                                 | 9.25                                                                     |
| Malaysia                       | 29.90                        | 314.34                       | 716.60                                | 94.64                     | -1.18                    | 89.70          | 138.94                               | 220.52                                                                   |

1. Gross production + imports – exports – losses.

2. CO<sub>2</sub> emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

## Selected indicators for 2014 (continued)

| TPES/<br>pop.<br>(toe/capita) | TPES/<br>GDP<br>(toe/000<br>2010 USD) | TPES/<br>GDP (PPP)<br>(toe/000<br>2010 USD) | Elec.<br>cons./pop.<br>(kWh/<br>capita) | CO <sub>2</sub> /<br>TPES<br>(t CO <sub>2</sub> /<br>toe) | CO <sub>2</sub> /<br>pop.<br>(t CO <sub>2</sub> /<br>capita) | CO <sub>2</sub> /<br>GDP<br>(kg CO <sub>2</sub> /<br>2010 USD) | CO <sub>2</sub> /<br>GDP (PPP)<br>(kg CO <sub>2</sub> /<br>2010 USD) | Region/<br>Country/<br>Economy |
|-------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| 0.34                          | 0.20                                  | 0.09                                        | 357                                     | 1.45                                                      | 0.49                                                         | 0.29                                                           | 0.13                                                                 | Ghana                          |
| 5.94                          | 0.17                                  | 0.20                                        | 5818                                    | 2.74                                                      | 16.25                                                        | 0.47                                                           | 0.55                                                                 | Gibraltar                      |
| 2.12                          | 0.09                                  | 0.09                                        | 5047                                    | 2.85                                                      | 6.03                                                         | 0.27                                                           | 0.25                                                                 | Greece                         |
| 0.83                          | 0.28                                  | 0.12                                        | 575                                     | 1.22                                                      | 1.01                                                         | 0.34                                                           | 0.14                                                                 | Guatemala                      |
| 0.39                          | 0.54                                  | 0.24                                        | 39                                      | 0.67                                                      | 0.26                                                         | 0.36                                                           | 0.16                                                                 | Haiti                          |
| 0.67                          | 0.30                                  | 0.15                                        | 697                                     | 1.63                                                      | 1.10                                                         | 0.48                                                           | 0.24                                                                 | Honduras                       |
| 1.97                          | 0.06                                  | 0.04                                        | 6073                                    | 3.37                                                      | 6.62                                                         | 0.19                                                           | 0.13                                                                 | Hong Kong, China               |
| 2.31                          | 0.17                                  | 0.10                                        | 3966                                    | 1.76                                                      | 4.08                                                         | 0.29                                                           | 0.18                                                                 | Hungary                        |
| 17.94                         | 0.41                                  | 0.44                                        | 53896                                   | 0.35                                                      | 6.25                                                         | 0.14                                                           | 0.15                                                                 | Iceland                        |
| 0.64                          | 0.38                                  | 0.12                                        | 805                                     | 2.45                                                      | 1.56                                                         | 0.92                                                           | 0.29                                                                 | India                          |
| 0.89                          | 0.24                                  | 0.09                                        | 814                                     | 1.94                                                      | 1.72                                                         | 0.46                                                           | 0.17                                                                 | Indonesia                      |
| 3.03                          | 0.51                                  | 0.19                                        | 2996                                    | 2.35                                                      | 7.12                                                         | 1.20                                                           | 0.44                                                                 | Islamic Rep. of Iran           |
| 1.42                          | 0.28                                  | 0.10                                        | 1313                                    | 2.85                                                      | 4.05                                                         | 0.80                                                           | 0.29                                                                 | Iraq                           |
| 2.77                          | 0.05                                  | 0.06                                        | 5725                                    | 2.65                                                      | 7.34                                                         | 0.14                                                           | 0.16                                                                 | Ireland                        |
| 2.76                          | 0.08                                  | 0.09                                        | 6604                                    | 2.85                                                      | 7.88                                                         | 0.24                                                           | 0.26                                                                 | Israel                         |
| 2.41                          | 0.07                                  | 0.07                                        | 5002                                    | 2.18                                                      | 5.26                                                         | 0.16                                                           | 0.16                                                                 | Italy                          |
| 1.03                          | 0.21                                  | 0.12                                        | 1110                                    | 2.55                                                      | 2.64                                                         | 0.53                                                           | 0.32                                                                 | Jamaica                        |
| 3.48                          | 0.08                                  | 0.10                                        | 7829                                    | 2.69                                                      | 9.35                                                         | 0.21                                                           | 0.27                                                                 | Japan                          |
| 1.24                          | 0.28                                  | 0.11                                        | 2517                                    | 2.95                                                      | 3.65                                                         | 0.82                                                           | 0.32                                                                 | Jordan                         |
| 4.43                          | 0.41                                  | 0.20                                        | 5600                                    | 2.92                                                      | 12.94                                                        | 1.21                                                           | 0.57                                                                 | Kazakhstan                     |
| 0.53                          | 0.48                                  | 0.19                                        | 171                                     | 0.52                                                      | 0.28                                                         | 0.25                                                           | 0.10                                                                 | Kenya                          |
| 5.32                          | 0.22                                  | 0.16                                        | 10564                                   | 2.12                                                      | 11.26                                                        | 0.46                                                           | 0.33                                                                 | Korea                          |
| 1.21                          | 0.34                                  | 0.14                                        | 2803                                    | 3.35                                                      | 4.06                                                         | 1.13                                                           | 0.48                                                                 | Kosovo                         |
| 9.03                          | 0.25                                  | 0.13                                        | 15333                                   | 2.54                                                      | 22.94                                                        | 0.63                                                           | 0.33                                                                 | Kuwait                         |
| 0.65                          | 0.65                                  | 0.21                                        | 1942                                    | 2.20                                                      | 1.43                                                         | 1.43                                                           | 0.46                                                                 | Kyrgyzstan                     |
| 2.18                          | 0.16                                  | 0.10                                        | 3514                                    | 1.55                                                      | 3.38                                                         | 0.24                                                           | 0.16                                                                 | Latvia <sup>5</sup>            |
| 1.65                          | 0.18                                  | 0.10                                        | 3565                                    | 2.99                                                      | 4.92                                                         | 0.55                                                           | 0.30                                                                 | Lebanon                        |
| 2.85                          | 0.47                                  | 0.20                                        | 1841                                    | 2.68                                                      | 7.65                                                         | 1.26                                                           | 0.52                                                                 | Libya                          |
| 2.39                          | 0.16                                  | 0.10                                        | 3826                                    | 1.47                                                      | 3.52                                                         | 0.24                                                           | 0.14                                                                 | Lithuania                      |
| 6.84                          | 0.07                                  | 0.08                                        | 13873                                   | 2.42                                                      | 16.57                                                        | 0.16                                                           | 0.20                                                                 | Luxembourg                     |
| 3.00                          | 0.29                                  | 0.13                                        | 4646                                    | 2.46                                                      | 7.37                                                         | 0.70                                                           | 0.31                                                                 | Malaysia                       |

5. Please refer to geographical coverage section for more details.

## Selected indicators for 2014 (continued)

| Region/<br>Country/<br>Economy | Popu-<br>lation<br>(million) | GDP<br>(billion<br>2010 USD) | GDP<br>(PPP)<br>(billion<br>2010 USD) | Energy<br>prod.<br>(Mtoe) | Net<br>imports<br>(Mtoe) | TPES<br>(Mtoe) | Elec.<br>cons. <sup>1</sup><br>(TWh) | CO <sub>2</sub><br>emissions <sup>2</sup><br>(Mt<br>of CO <sub>2</sub> ) |
|--------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------|--------------------------|----------------|--------------------------------------|--------------------------------------------------------------------------|
| Malta                          | 0.43                         | 8.60                         | 11.65                                 | 0.01                      | 2.05                     | 0.77           | 2.14                                 | 2.34                                                                     |
| Mauritius                      | 1.26                         | 11.14                        | 21.91                                 | 0.22                      | 1.69                     | 1.40           | 2.75                                 | 3.96                                                                     |
| Mexico                         | 119.71                       | 1 176.66                     | 1 939.05                              | 208.27                    | -15.09                   | 187.98         | 259.65                               | 430.92                                                                   |
| Moldova                        | 3.56                         | 7.03                         | 16.56                                 | 0.33                      | 2.98                     | 3.30           | 4.93                                 | 7.25                                                                     |
| Mongolia                       | 2.91                         | 11.40                        | 32.49                                 | 14.41                     | -9.32                    | 5.37           | 5.90                                 | 18.16                                                                    |
| Montenegro                     | 0.62                         | 4.38                         | 8.81                                  | 0.69                      | 0.29                     | 0.96           | 2.87                                 | 2.22                                                                     |
| Morocco                        | 33.92                        | 108.39                       | 241.44                                | 1.76                      | 19.53                    | 18.98          | 30.93                                | 53.11                                                                    |
| Mozambique                     | 27.22                        | 13.40                        | 28.73                                 | 17.99                     | -5.35                    | 11.64          | 12.59                                | 3.87                                                                     |
| Myanmar                        | 53.44                        | 66.24                        | 230.57                                | 25.68                     | -7.26                    | 19.31          | 11.26                                | 19.56                                                                    |
| Namibia                        | 2.40                         | 14.00                        | 22.36                                 | 0.46                      | 1.39                     | 1.81           | 3.76                                 | 3.59                                                                     |
| Nepal                          | 28.18                        | 19.03                        | 62.53                                 | 9.74                      | 2.07                     | 11.69          | 3.94                                 | 5.93                                                                     |
| Netherlands                    | 16.86                        | 845.61                       | 752.14                                | 58.53                     | 30.51                    | 72.95          | 113.21                               | 148.34                                                                   |
| New Zealand                    | 4.46                         | 162.07                       | 150.43                                | 17.05                     | 4.56                     | 20.56          | 40.71                                | 31.24                                                                    |
| Nicaragua                      | 6.01                         | 10.68                        | 27.65                                 | 2.17                      | 1.49                     | 3.66           | 3.49                                 | 4.54                                                                     |
| Niger                          | 19.11                        | 7.31                         | 16.75                                 | 3.05                      | -0.11                    | 2.89           | 0.99                                 | 1.96                                                                     |
| Nigeria                        | 177.48                       | 452.29                       | 980.62                                | 260.02                    | -125.23                  | 134.71         | 25.50                                | 60.16                                                                    |
| Norway                         | 5.14                         | 458.96                       | 307.97                                | 196.31                    | -167.40                  | 28.75          | 118.16                               | 35.31                                                                    |
| Oman                           | 4.24                         | 67.48                        | 152.96                                | 74.49                     | -48.54                   | 24.33          | 25.96                                | 59.90                                                                    |
| Pakistan                       | 185.04                       | 206.25                       | 832.20                                | 68.20                     | 22.05                    | 89.89          | 87.40                                | 137.43                                                                   |
| Panama                         | 3.87                         | 40.48                        | 75.54                                 | 0.80                      | 6.71                     | 4.21           | 8.05                                 | 10.59                                                                    |
| Paraguay                       | 6.55                         | 24.65                        | 54.58                                 | 7.08                      | -1.85                    | 5.17           | 10.25                                | 5.19                                                                     |
| Peru                           | 30.97                        | 181.34                       | 347.10                                | 27.32                     | -1.73                    | 23.78          | 40.50                                | 47.79                                                                    |
| Philippines                    | 99.14                        | 250.79                       | 645.80                                | 25.85                     | 22.29                    | 47.67          | 69.99                                | 95.71                                                                    |
| Poland                         | 38.48                        | 534.56                       | 886.15                                | 67.33                     | 27.90                    | 94.02          | 150.98                               | 279.04                                                                   |
| Portugal                       | 10.40                        | 224.00                       | 267.77                                | 6.00                      | 16.38                    | 21.16          | 48.50                                | 42.81                                                                    |
| Qatar                          | 2.17                         | 161.79                       | 285.56                                | 219.93                    | -173.81                  | 44.08          | 36.35                                | 77.61                                                                    |
| Romania                        | 19.91                        | 181.81                       | 363.28                                | 26.37                     | 5.36                     | 31.69          | 51.45                                | 68.16                                                                    |
| Russian Federation             | 143.82                       | 1 676.80                     | 3 219.77                              | 1 305.68                  | -570.84                  | 710.88         | 949.59                               | 1 467.55                                                                 |
| Saudi Arabia                   | 30.89                        | 649.57                       | 1 501.55                              | 622.42                    | -405.45                  | 213.51         | 290.66                               | 506.59                                                                   |
| Senegal                        | 14.67                        | 14.90                        | 32.00                                 | 1.87                      | 2.42                     | 3.96           | 3.25                                 | 6.28                                                                     |
| Serbia                         | 7.13                         | 4.38                         | 9.57                                  | 9.44                      | 3.72                     | 13.26          | 30.46                                | 38.11                                                                    |

1. Gross production + imports – exports – losses.

2. CO<sub>2</sub> emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

# Selected indicators for 2014 (continued)

| TPES/<br>pop.<br>(toe/capita) | TPES/<br>GDP<br>(toe/000<br>2010 USD) | TPES/<br>GDP (PPP)<br>(toe/000<br>2010 USD) | Elec.<br>cons./pop.<br>(kWh/<br>capita) | CO <sub>2</sub> /<br>TPES<br>(t CO <sub>2</sub> /<br>toe) | CO <sub>2</sub> /<br>pop.<br>(t CO <sub>2</sub> /<br>capita) | CO <sub>2</sub> /<br>GDP<br>(kg CO <sub>2</sub> /<br>2010 USD) | CO <sub>2</sub> /<br>GDP (PPP)<br>(kg CO <sub>2</sub> /<br>2010 USD) | Region/<br>Country/<br>Economy |
|-------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| 1.81                          | 0.09                                  | 0.07                                        | 5012                                    | 3.03                                                      | 5.49                                                         | 0.27                                                           | 0.20                                                                 | Malta                          |
| 1.11                          | 0.13                                  | 0.06                                        | 2182                                    | 2.82                                                      | 3.14                                                         | 0.36                                                           | 0.18                                                                 | Mauritius                      |
| 1.57                          | 0.16                                  | 0.10                                        | 2169                                    | 2.29                                                      | 3.60                                                         | 0.37                                                           | 0.22                                                                 | Mexico                         |
| 0.93                          | 0.47                                  | 0.20                                        | 1386                                    | 2.19                                                      | 2.04                                                         | 1.03                                                           | 0.44                                                                 | Moldova                        |
| 1.85                          | 0.47                                  | 0.17                                        | 2027                                    | 3.38                                                      | 6.24                                                         | 1.59                                                           | 0.56                                                                 | Mongolia                       |
| 1.54                          | 0.22                                  | 0.11                                        | 4611                                    | 2.32                                                      | 3.57                                                         | 0.51                                                           | 0.25                                                                 | Montenegro                     |
| 0.56                          | 0.18                                  | 0.08                                        | 912                                     | 2.80                                                      | 1.57                                                         | 0.49                                                           | 0.22                                                                 | Morocco                        |
| 0.43                          | 0.87                                  | 0.41                                        | 463                                     | 0.33                                                      | 0.14                                                         | 0.29                                                           | 0.13                                                                 | Mozambique                     |
| 0.36                          | 0.29                                  | 0.08                                        | 211                                     | 1.01                                                      | 0.37                                                         | 0.30                                                           | 0.08                                                                 | Myanmar                        |
| 0.75                          | 0.13                                  | 0.08                                        | 1563                                    | 1.99                                                      | 1.50                                                         | 0.26                                                           | 0.16                                                                 | Namibia                        |
| 0.41                          | 0.61                                  | 0.19                                        | 140                                     | 0.51                                                      | 0.21                                                         | 0.31                                                           | 0.09                                                                 | Nepal                          |
| 4.33                          | 0.09                                  | 0.10                                        | 6713                                    | 2.03                                                      | 8.80                                                         | 0.18                                                           | 0.20                                                                 | Netherlands                    |
| 4.61                          | 0.13                                  | 0.14                                        | 9131                                    | 1.52                                                      | 7.01                                                         | 0.19                                                           | 0.21                                                                 | New Zealand                    |
| 0.61                          | 0.34                                  | 0.13                                        | 580                                     | 1.24                                                      | 0.76                                                         | 0.43                                                           | 0.16                                                                 | Nicaragua                      |
| 0.15                          | 0.39                                  | 0.17                                        | 52                                      | 0.68                                                      | 0.10                                                         | 0.27                                                           | 0.12                                                                 | Niger                          |
| 0.76                          | 0.30                                  | 0.14                                        | 144                                     | 0.45                                                      | 0.34                                                         | 0.13                                                           | 0.06                                                                 | Nigeria                        |
| 5.60                          | 0.06                                  | 0.09                                        | 23001                                   | 1.23                                                      | 6.87                                                         | 0.08                                                           | 0.11                                                                 | Norway                         |
| 5.74                          | 0.36                                  | 0.16                                        | 6128                                    | 2.46                                                      | 14.14                                                        | 0.89                                                           | 0.39                                                                 | Oman                           |
| 0.49                          | 0.44                                  | 0.11                                        | 472                                     | 1.53                                                      | 0.74                                                         | 0.67                                                           | 0.17                                                                 | Pakistan                       |
| 1.09                          | 0.10                                  | 0.06                                        | 2082                                    | 2.51                                                      | 2.74                                                         | 0.26                                                           | 0.14                                                                 | Panama                         |
| 0.79                          | 0.21                                  | 0.09                                        | 1563                                    | 1.00                                                      | 0.79                                                         | 0.21                                                           | 0.10                                                                 | Paraguay                       |
| 0.77                          | 0.13                                  | 0.07                                        | 1308                                    | 2.01                                                      | 1.54                                                         | 0.26                                                           | 0.14                                                                 | Peru                           |
| 0.48                          | 0.19                                  | 0.07                                        | 706                                     | 2.01                                                      | 0.97                                                         | 0.38                                                           | 0.15                                                                 | Philippines                    |
| 2.44                          | 0.18                                  | 0.11                                        | 3923                                    | 2.97                                                      | 7.25                                                         | 0.52                                                           | 0.31                                                                 | Poland                         |
| 2.03                          | 0.09                                  | 0.08                                        | 4663                                    | 2.02                                                      | 4.12                                                         | 0.19                                                           | 0.16                                                                 | Portugal                       |
| 20.29                         | 0.27                                  | 0.15                                        | 16736                                   | 1.76                                                      | 35.73                                                        | 0.48                                                           | 0.27                                                                 | Qatar                          |
| 1.59                          | 0.17                                  | 0.09                                        | 2584                                    | 2.15                                                      | 3.42                                                         | 0.37                                                           | 0.19                                                                 | Romania                        |
| 4.94                          | 0.42                                  | 0.22                                        | 6603                                    | 2.06                                                      | 10.20                                                        | 0.88                                                           | 0.46                                                                 | Russian Federation             |
| 6.91                          | 0.33                                  | 0.14                                        | 9410                                    | 2.37                                                      | 16.40                                                        | 0.78                                                           | 0.34                                                                 | Saudi Arabia                   |
| 0.27                          | 0.27                                  | 0.12                                        | 222                                     | 1.59                                                      | 0.43                                                         | 0.42                                                           | 0.20                                                                 | Senegal                        |
| 1.86                          | 3.02                                  | 1.39                                        | 4273                                    | 2.87                                                      | 5.35                                                         | 8.69                                                           | 3.98                                                                 | Serbia                         |

## Selected indicators for 2014 (continued)

| Region/<br>Country/<br>Economy | Popu-<br>lation<br>(million) | GDP<br>(billion<br>2010 USD) | GDP<br>(PPP)<br>(billion<br>2010 USD) | Energy<br>prod.<br>(Mtoe) | Net<br>imports<br>(Mtoe) | TPES<br>(Mtoe) | Elec.<br>cons. <sup>1</sup><br>(TWh) | CO <sub>2</sub><br>emissions <sup>2</sup><br>(Mt<br>of CO <sub>2</sub> ) |
|--------------------------------|------------------------------|------------------------------|---------------------------------------|---------------------------|--------------------------|----------------|--------------------------------------|--------------------------------------------------------------------------|
| Singapore                      | 5.47                         | 279.12                       | 423.14                                | 0.65                      | 75.75                    | 28.01          | 48.38                                | 45.32                                                                    |
| Slovak Republic                | 5.42                         | 96.90                        | 143.50                                | 6.57                      | 9.77                     | 15.95          | 27.84                                | 29.33                                                                    |
| Slovenia                       | 2.06                         | 47.93                        | 56.46                                 | 3.70                      | 3.01                     | 6.67           | 13.87                                | 12.76                                                                    |
| South Africa                   | 54.00                        | 411.04                       | 658.69                                | 168.32                    | -18.03                   | 147.02         | 228.98                               | 437.37                                                                   |
| South Sudan                    | 11.91                        | 6.08                         | 22.48                                 | 8.11                      | -7.37                    | 0.70           | 0.46                                 | 1.52                                                                     |
| Spain                          | 46.46                        | 1375.52                      | 1448.78                               | 35.10                     | 91.94                    | 114.56         | 248.95                               | 231.99                                                                   |
| Sri Lanka                      | 20.64                        | 72.49                        | 215.71                                | 5.33                      | 5.93                     | 10.71          | 11.04                                | 16.74                                                                    |
| Sudan                          | 39.35                        | 67.01                        | 149.68                                | 16.34                     | -1.07                    | 14.99          | 9.75                                 | 13.34                                                                    |
| Suriname <sup>5</sup>          | 0.54                         | 4.96                         | 8.37                                  | 0.99                      | -0.25                    | 0.69           | 1.99                                 | 1.99                                                                     |
| Sweden                         | 9.70                         | 517.63                       | 415.05                                | 34.54                     | 16.30                    | 48.16          | 130.71                               | 37.42                                                                    |
| Switzerland                    | 8.19                         | 620.44                       | 428.99                                | 13.27                     | 13.36                    | 25.06          | 61.58                                | 37.74                                                                    |
| Syrian Arab Republic           | 22.16                        | 54.60                        | 120.54                                | 5.64                      | 5.43                     | 10.80          | 18.24                                | 27.57                                                                    |
| Chinese Taipei                 | 23.38                        | 478.34                       | 932.76                                | 13.64                     | 101.70                   | 110.23         | 251.07                               | 249.66                                                                   |
| Tajikistan                     | 8.30                         | 7.47                         | 20.87                                 | 1.79                      | 1.08                     | 2.80           | 12.38                                | 4.66                                                                     |
| Tanzania                       | 51.82                        | 40.88                        | 119.36                                | 22.17                     | 2.87                     | 24.83          | 5.18                                 | 10.37                                                                    |
| Thailand                       | 67.73                        | 382.59                       | 996.11                                | 78.74                     | 59.58                    | 134.76         | 173.75                               | 243.52                                                                   |
| Togo                           | 7.12                         | 3.92                         | 9.50                                  | 2.64                      | 0.71                     | 3.30           | 1.10                                 | 1.72                                                                     |
| Trinidad and Tobago            | 1.35                         | 21.88                        | 40.47                                 | 39.66                     | -19.55                   | 19.57          | 9.66                                 | 23.21                                                                    |
| Tunisia                        | 11.00                        | 47.52                        | 117.54                                | 6.71                      | 4.15                     | 10.52          | 16.09                                | 25.01                                                                    |
| Turkey                         | 76.62                        | 870.92                       | 1392.43                               | 31.35                     | 93.72                    | 121.54         | 219.89                               | 307.11                                                                   |
| Turkmenistan                   | 5.31                         | 34.31                        | 76.76                                 | 77.98                     | -50.74                   | 26.75          | 14.64                                | 67.00                                                                    |
| Ukraine                        | 45.36                        | 134.02                       | 346.35                                | 76.93                     | 27.47                    | 105.68         | 154.77                               | 236.54                                                                   |
| United Arab Emirates           | 9.09                         | 350.93                       | 574.76                                | 200.04                    | -109.55                  | 70.47          | 102.17                               | 175.43                                                                   |
| United Kingdom                 | 64.60                        | 2605.73                      | 2441.45                               | 108.24                    | 87.40                    | 179.42         | 331.44                               | 407.84                                                                   |
| United States                  | 319.17                       | 16156.62                     | 16156.62                              | 2011.98                   | 258.11                   | 2216.19        | 4137.10                              | 5176.21                                                                  |
| Uruguay                        | 3.42                         | 47.61                        | 66.75                                 | 2.62                      | 2.33                     | 4.71           | 10.49                                | 6.27                                                                     |
| Uzbekistan                     | 30.76                        | 53.81                        | 160.23                                | 55.84                     | -12.17                   | 43.68          | 50.61                                | 97.90                                                                    |
| Venezuela                      | 30.69                        | 421.58                       | 503.75                                | 185.71                    | -117.48                  | 67.50          | 81.69                                | 154.99                                                                   |
| Viet Nam                       | 90.73                        | 144.84                       | 477.38                                | 71.20                     | -2.69                    | 66.62          | 130.57                               | 143.31                                                                   |
| Yemen                          | 26.18                        | 28.54                        | 93.39                                 | 16.05                     | -8.44                    | 7.42           | 5.68                                 | 21.34                                                                    |
| Zambia                         | 15.72                        | 26.02                        | 57.37                                 | 9.13                      | 0.83                     | 10.06          | 11.05                                | 3.19                                                                     |
| Zimbabwe                       | 15.25                        | 12.65                        | 25.53                                 | 11.52                     | 1.15                     | 11.05          | 8.28                                 | 11.49                                                                    |

1. Gross production + imports – exports – losses.

2. CO<sub>2</sub> emissions from fuel combustion only. Emissions are calculated using the IEA's energy balances and the Revised 2006 IPCC Guidelines.

## Selected indicators for 2014 (continued)

| TPES/<br>pop.<br>(toe/capita) | TPES/<br>GDP<br>(toe/000<br>2010 USD) | TPES/<br>GDP (PPP)<br>(toe/000<br>2010 USD) | Elec.<br>cons./pop.<br>(kWh/<br>capita) | CO <sub>2</sub> /<br>TPES<br>(t CO <sub>2</sub> /<br>toe) | CO <sub>2</sub> /<br>pop.<br>(t CO <sub>2</sub> /<br>capita) | CO <sub>2</sub> /<br>GDP<br>(kg CO <sub>2</sub> /<br>2010 USD) | CO <sub>2</sub> /<br>GDP (PPP)<br>(kg CO <sub>2</sub> /<br>2010 USD) | Region/<br>Country/<br>Economy |
|-------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------|
| 5.12                          | 0.10                                  | 0.07                                        | 8844                                    | 1.62                                                      | 8.29                                                         | 0.16                                                           | 0.11                                                                 | Singapore                      |
| 2.94                          | 0.16                                  | 0.11                                        | 5137                                    | 1.84                                                      | 5.41                                                         | 0.30                                                           | 0.20                                                                 | Slovak Republic                |
| 3.24                          | 0.14                                  | 0.12                                        | 6728                                    | 1.91                                                      | 6.19                                                         | 0.27                                                           | 0.23                                                                 | Slovenia                       |
| 2.72                          | 0.36                                  | 0.22                                        | 4240                                    | 2.97                                                      | 8.10                                                         | 1.06                                                           | 0.66                                                                 | South Africa                   |
| 0.06                          | 0.12                                  | 0.03                                        | 39                                      | 2.17                                                      | 0.13                                                         | 0.25                                                           | 0.07                                                                 | South Sudan                    |
| 2.47                          | 0.08                                  | 0.08                                        | 5358                                    | 2.03                                                      | 4.99                                                         | 0.17                                                           | 0.16                                                                 | Spain                          |
| 0.52                          | 0.15                                  | 0.05                                        | 535                                     | 1.56                                                      | 0.81                                                         | 0.23                                                           | 0.08                                                                 | Sri Lanka                      |
| 0.38                          | 0.22                                  | 0.10                                        | 248                                     | 0.89                                                      | 0.34                                                         | 0.20                                                           | 0.09                                                                 | Sudan                          |
| 1.28                          | 0.14                                  | 0.08                                        | 3699                                    | 2.89                                                      | 3.70                                                         | 0.40                                                           | 0.24                                                                 | Suriname <sup>5</sup>          |
| 4.97                          | 0.09                                  | 0.12                                        | 13480                                   | 0.78                                                      | 3.86                                                         | 0.07                                                           | 0.09                                                                 | Sweden                         |
| 3.06                          | 0.04                                  | 0.06                                        | 7520                                    | 1.51                                                      | 4.61                                                         | 0.06                                                           | 0.09                                                                 | Switzerland                    |
| 0.49                          | 0.20                                  | 0.09                                        | 823                                     | 2.55                                                      | 1.24                                                         | 0.50                                                           | 0.23                                                                 | Syrian Arab Republic           |
| 4.71                          | 0.23                                  | 0.12                                        | 10738                                   | 2.26                                                      | 10.68                                                        | 0.52                                                           | 0.27                                                                 | Chinese Taipei                 |
| 0.34                          | 0.38                                  | 0.13                                        | 1492                                    | 1.66                                                      | 0.56                                                         | 0.62                                                           | 0.22                                                                 | Tajikistan                     |
| 0.48                          | 0.61                                  | 0.21                                        | 100                                     | 0.42                                                      | 0.20                                                         | 0.25                                                           | 0.09                                                                 | Tanzania                       |
| 1.99                          | 0.35                                  | 0.14                                        | 2566                                    | 1.81                                                      | 3.60                                                         | 0.64                                                           | 0.24                                                                 | Thailand                       |
| 0.46                          | 0.84                                  | 0.35                                        | 155                                     | 0.52                                                      | 0.24                                                         | 0.44                                                           | 0.18                                                                 | Togo                           |
| 14.45                         | 0.89                                  | 0.48                                        | 7137                                    | 1.19                                                      | 17.15                                                        | 1.06                                                           | 0.57                                                                 | Trinidad and Tobago            |
| 0.96                          | 0.22                                  | 0.09                                        | 1463                                    | 2.38                                                      | 2.27                                                         | 0.53                                                           | 0.21                                                                 | Tunisia                        |
| 1.59                          | 0.14                                  | 0.09                                        | 2870                                    | 2.53                                                      | 4.01                                                         | 0.35                                                           | 0.22                                                                 | Turkey                         |
| 5.04                          | 0.78                                  | 0.35                                        | 2759                                    | 2.50                                                      | 12.62                                                        | 1.95                                                           | 0.87                                                                 | Turkmenistan                   |
| 2.33                          | 0.79                                  | 0.31                                        | 3412                                    | 2.24                                                      | 5.21                                                         | 1.76                                                           | 0.68                                                                 | Ukraine                        |
| 7.76                          | 0.20                                  | 0.12                                        | 11245                                   | 2.49                                                      | 19.31                                                        | 0.50                                                           | 0.31                                                                 | United Arab Emirates           |
| 2.78                          | 0.07                                  | 0.07                                        | 5131                                    | 2.27                                                      | 6.31                                                         | 0.16                                                           | 0.17                                                                 | United Kingdom                 |
| 6.94                          | 0.14                                  | 0.14                                        | 12962                                   | 2.34                                                      | 16.22                                                        | 0.32                                                           | 0.32                                                                 | United States                  |
| 1.38                          | 0.10                                  | 0.07                                        | 3068                                    | 1.33                                                      | 1.83                                                         | 0.13                                                           | 0.09                                                                 | Uruguay                        |
| 1.42                          | 0.81                                  | 0.27                                        | 1645                                    | 2.24                                                      | 3.18                                                         | 1.82                                                           | 0.61                                                                 | Uzbekistan                     |
| 2.20                          | 0.16                                  | 0.13                                        | 2661                                    | 2.30                                                      | 5.05                                                         | 0.37                                                           | 0.31                                                                 | Venezuela                      |
| 0.73                          | 0.46                                  | 0.14                                        | 1439                                    | 2.15                                                      | 1.58                                                         | 0.99                                                           | 0.30                                                                 | Viet Nam                       |
| 0.28                          | 0.26                                  | 0.08                                        | 217                                     | 2.87                                                      | 0.81                                                         | 0.75                                                           | 0.23                                                                 | Yemen                          |
| 0.64                          | 0.39                                  | 0.18                                        | 703                                     | 0.32                                                      | 0.20                                                         | 0.12                                                           | 0.06                                                                 | Zambia                         |
| 0.72                          | 0.87                                  | 0.43                                        | 543                                     | 1.04                                                      | 0.75                                                         | 0.91                                                           | 0.45                                                                 | Zimbabwe                       |

5. Please refer to geographical coverage section for more details.

Sources: Energy data: IEA.

Population: OECD/World Bank.

GDP and GDP(PPP) (in 2010 USD): OECD/World Bank/CEPII (Paris).

## General conversion factors for energy

| To:   | TJ                     | Gcal                   | Mtoe                   | MBtu                | GWh                    |
|-------|------------------------|------------------------|------------------------|---------------------|------------------------|
| From: | multiply by:           |                        |                        |                     |                        |
| TJ    | 1                      | $2.388 \times 10^2$    | $2.388 \times 10^{-5}$ | $9.478 \times 10^2$ | $2.778 \times 10^{-1}$ |
| Gcal  | $4.187 \times 10^{-3}$ | 1                      | $1.000 \times 10^{-7}$ | 3.968               | $1.163 \times 10^{-3}$ |
| Mtoe  | $4.187 \times 10^4$    | $1.000 \times 10^7$    | 1                      | $3.968 \times 10^7$ | $1.163 \times 10^4$    |
| MBtu  | $1.055 \times 10^{-3}$ | $2.520 \times 10^{-1}$ | $2.520 \times 10^{-8}$ | 1                   | $2.931 \times 10^{-4}$ |
| GWh   | 3.600                  | $8.598 \times 10^2$    | $8.598 \times 10^{-5}$ | $3.412 \times 10^3$ | 1                      |

## Conversion factors for mass

| To:             | kg                     | t                      | lt                     | st                     | lb                  |
|-----------------|------------------------|------------------------|------------------------|------------------------|---------------------|
| From:           | multiply by:           |                        |                        |                        |                     |
| kilogramme (kg) | 1                      | $1.000 \times 10^3$    | $9.842 \times 10^{-4}$ | $1.102 \times 10^{-3}$ | 2.205               |
| tonne (t)       | $1.000 \times 10^3$    | 1                      | $9.842 \times 10^{-1}$ | 1.102                  | $2.205 \times 10^3$ |
| long ton (lt)   | $1.016 \times 10^3$    | 1.016                  | 1                      | 1.120                  | $2.240 \times 10^3$ |
| short ton (st)  | $9.072 \times 10^2$    | $9.072 \times 10^{-1}$ | $8.929 \times 10^{-1}$ | 1                      | $2.000 \times 10^3$ |
| pound (lb)      | $4.536 \times 10^{-1}$ | $4.536 \times 10^{-4}$ | $4.464 \times 10^{-4}$ | $5.000 \times 10^{-4}$ | 1                   |

## Conversion factors for volume

| To:                           | gal U.S.               | gal U.K.               | bbl                    | ft <sup>3</sup>        | l                   | m <sup>3</sup>         |
|-------------------------------|------------------------|------------------------|------------------------|------------------------|---------------------|------------------------|
| From:                         | multiply by:           |                        |                        |                        |                     |                        |
| U.S. gallon (gal)             | 1                      | $8.327 \times 10^{-1}$ | $2.381 \times 10^{-2}$ | $1.337 \times 10^{-1}$ | 3.785               | $3.785 \times 10^{-3}$ |
| U.K. gallon (gal)             | 1.201                  | 1                      | $2.859 \times 10^{-2}$ | $1.605 \times 10^{-1}$ | 4.546               | $4.546 \times 10^{-3}$ |
| barrel (bbl)                  | $4.200 \times 10^1$    | $3.497 \times 10^1$    | 1                      | 5.615                  | $1.590 \times 10^2$ | $1.590 \times 10^{-1}$ |
| cubic foot (ft <sup>3</sup> ) | 7.481                  | 6.229                  | $1.781 \times 10^{-1}$ | 1                      | $2.832 \times 10^1$ | $2.832 \times 10^{-2}$ |
| litre (l)                     | $2.642 \times 10^{-1}$ | $2.200 \times 10^{-1}$ | $6.290 \times 10^{-3}$ | $3.531 \times 10^{-2}$ | 1                   | $1.000 \times 10^{-3}$ |
| cubic metre (m <sup>3</sup> ) | $2.642 \times 10^2$    | $2.200 \times 10^2$    | 6.290                  | $3.531 \times 10^1$    | $1.000 \times 10^3$ | 1                      |

## Selected country-specific net calorific values

### Steam coal

| Top-ten producers in 2015 | toe/tonne |
|---------------------------|-----------|
| People's Rep. of China    | 0.479     |
| United States             | 0.527     |
| India                     | 0.395     |
| Indonesia                 | 0.570     |
| South Africa              | 0.598     |
| Australia                 | 0.564     |
| Russian Federation        | 0.601     |
| Kazakhstan                | 0.650     |
| Colombia                  | 0.444     |
| Poland                    | 0.546     |

### Crude oil<sup>1</sup>

| Top-ten producers in 2015 | toe/tonne |
|---------------------------|-----------|
| Saudi Arabia              | 1.016     |
| Russian Federation        | 1.005     |
| United States             | 1.033     |
| People's Rep. of China    | 1.000     |
| Iraq                      | 1.023     |
| Canada                    | 1.022     |
| Kuwait                    | 1.016     |
| Islamic Republic of Iran  | 1.019     |
| United Arab Emirates      | 1.018     |
| Venezuela                 | 1.069     |

<sup>1</sup> Excludes NGL, feedstocks, additives and other hydrocarbons.

## Default net calorific values

### Oil products

|                               | OECD Europe <sup>2</sup> | OECD Americas | OECD Asia Oceania | Non-OECD |
|-------------------------------|--------------------------|---------------|-------------------|----------|
|                               | toe/tonne                |               |                   |          |
| Refinery gas                  | 1.182                    | 1.149         | 1.149             | 1.149    |
| Ethane                        | 1.182                    | 1.180         | 1.180             | 1.180    |
| Liquefied petroleum gases     | 1.099                    | 1.130         | 1.139             | 1.130    |
| Motor gasoline excl. biofuels | 1.051                    | 1.070         | 1.065             | 1.070    |
| Aviation gasoline             | 1.051                    | 1.070         | 1.065             | 1.070    |
| Gasoline type jet fuel        | 1.027                    | 1.070         | 1.065             | 1.070    |
| Kerosene type jet fuel        | 1.027                    | 1.065         | 1.063             | 1.065    |
| Kerosene                      | 1.027                    | 1.046         | 1.025             | 1.046    |
| Gas/diesel oil excl. biofuels | 1.017                    | 1.017         | 1.017             | 1.034    |
| Fuel oil                      | 0.955                    | 0.960         | 1.017             | 0.960    |
| Naphtha                       | 1.051                    | 1.075         | 1.032             | 1.075    |
| White spirit                  | 1.041                    | 1.027         | 1.027             | 1.027    |
| Lubricants                    | 1.003                    | 1.003         | 1.025             | 1.003    |
| Bitumen                       | 0.931                    | 0.955         | 0.927             | 0.931    |
| Paraffin waxes                | 0.955                    | 0.955         | 0.955             | 0.955    |
| Petroleum coke                | 0.764                    | 0.764         | 0.807             | 0.764    |
| Non-specified oil products    | 0.955                    | 0.955         | 0.955             | 0.955    |

<sup>2</sup> Defaults for OECD Europe were also applied to non-OECD Europe and Eurasia countries.

## Selected country-specific gross calorific values

### Natural gas

| Top-ten producers in 2015 | kJ/m <sup>3</sup> |
|---------------------------|-------------------|
| United States             | 38 267            |
| Russian Federation        | 38 230            |
| Islamic Republic of Iran  | 39 356            |
| Qatar                     | 41 400            |
| Canada                    | 39 000            |
| People's Rep. of China    | 38 931            |
| Norway                    | 39 237            |
| Saudi Arabia              | 38 000            |
| Turkmenistan              | 37 889            |
| Algeria                   | 39 565            |

Note: To calculate the net calorific value, the gross calorific value is multiplied by 0.9.

## Conventions for electricity

Figures for electricity production, trade, and final consumption are calculated using the energy content of the electricity (i.e. at a rate of 1 TWh = 0.086 Mtoe). Hydro-electricity production (excluding pumped storage) and electricity produced by other non-thermal means (wind, tide/wave/ocean, photovoltaic, etc.) are accounted for similarly using 1 TWh = 0.086 Mtoe. However, the primary energy equivalent of nuclear electricity is calculated from the gross generation by assuming a 33% conversion efficiency, i.e. 1 TWh =  $(0.086 \div 0.33)$  Mtoe. For geothermal and solar thermal, if no country-specific information is reported, the primary energy equivalent is calculated as follows:

- 10% for geothermal electricity;
- 50% for geothermal heat;
- 33% for solar thermal electricity;
- 100% for solar thermal heat.

# Glossary

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Coal</b>               | <i>Coal</i> includes all coal, both primary (including coking coal, steam coal and lignite) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, gas works gas, coke oven gas, blast furnace gas and other recovered gases). For presentational purposes, peat (including peat products) and oil shale are also included in this category where applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Steam coal</b>         | <i>Steam coal</i> comprises anthracite, other bituminous coal and sub-bituminous coal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Crude oil</b>          | <i>Crude oil</i> comprises crude oil, natural gas liquids, refinery feedstocks and additives as well as other hydrocarbons.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Oil products</b>       | <i>Oil products</i> comprises refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other oil products.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Natural gas</b>        | <i>Natural gas</i> includes both "associated" and "non-associated" gas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Nuclear</b>            | <i>Nuclear</i> shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33%.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Hydro</b>              | <i>Hydro</i> shows the energy content of the electricity produced in hydro power plants. Hydro output excludes output from pumped storage plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Biofuels and waste</b> | <i>Biofuels and waste</i> comprises solid biofuels, liquid biofuels, biogases, industrial waste and municipal waste. Biofuels are defined as any plant matter used directly as fuel or converted into fuels (e.g. charcoal) or electricity and/or heat. Included here are wood, vegetal waste (including wood waste and crops used for energy production), ethanol, animal materials/wastes and sulphite lyes. Municipal waste comprises wastes produced by residential, commercial and public services, that are collected by local authorities for disposal in a central location for the production of heat and/or power.                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Other</b>              | <p><i>Other</i> includes geothermal, solar, wind, tide/wave/ocean energy, electricity and heat. Unless the actual efficiency of geothermal and solar thermal is known, the quantity of geothermal and solar energy entering electricity generation is inferred from the electricity/heat production at geothermal and solar plants assuming an average thermal efficiency of:</p> <ul style="list-style-type: none"> <li>■ 10% for geothermal electricity;</li> <li>■ 50% for geothermal heat;</li> <li>■ 33% for solar thermal electricity;</li> <li>■ 100% for solar thermal heat.</li> </ul> <p>For solar PV, wind and tide/wave/ocean energy, the quantities entering electricity generation are equal to the electrical energy generated. Direct use of geothermal and solar heat is also included here. Electricity is accounted for at the same heat value as electricity in final consumption (i.e. 1 GWh = 0.000086 Mtoe). Heat includes heat that is produced for sale and is accounted for in the transformation sector.</p> |

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Production</b>                     | <i>Production</i> is the production of primary energy, i.e. coking coal, steam coal, lignite, peat, oil shale, crude oil, NGLs, natural gas, biofuels and waste, nuclear, hydro, geothermal, solar and the heat from heat pumps that is extracted from the ambient environment. Production is calculated after removal of impurities (e.g. sulphur from natural gas).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Imports and exports</b>            | <p><i>Imports</i> and <i>exports</i> comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place.</p> <p><b>a) Oil and natural gas</b></p> <p>Quantities of crude oil and oil products imported or exported under processing agreements (i.e. refining on account) are included. Quantities of oil in transit are excluded. Crude oil, NGL and natural gas are reported as coming from the country of origin; refinery feedstocks and oil products are reported as coming from the country of last consignment. Re-exports of oil imported for processing within bonded areas are shown as exports of product from the processing country to the final destination.</p> <p><b>b) Coal</b></p> <p><i>Imports</i> and <i>exports</i> comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit is not included.</p> <p><b>c) Electricity</b></p> <p>Amounts are considered as imported or exported when they have crossed the national territorial boundaries of the country.</p> |
| <b>International marine bunkers</b>   | <i>International marine bunkers</i> covers those quantities delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>International aviation bunkers</b> | <i>International aviation bunkers</i> covers deliveries of aviation fuels to aircraft for international aviation. Fuels used by airlines for their road vehicles are excluded. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. For many countries this incorrectly excludes fuel used by domestically owned carriers for their international departures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Stock changes</b>                  | <i>Stock changes</i> reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Transfers</b>                      | <i>Transfers</i> includes both interproduct transfers, products transferred and recycled products.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Total primary energy supply (TPES)</b> | <i>Total primary energy supply (TPES)</i> is made up of production + imports – exports – international marine bunkers – international aviation bunkers ± stock changes. For the world total, international marine bunkers and international aviation bunkers are not subtracted from TPES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Statistical differences</b>            | <i>Statistical differences</i> includes the sum of the unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. It also includes the statistical differences that arise because of the variety of conversion factors in the coal and oil columns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Electricity plants</b>                 | <i>Electricity plants</i> refers to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producers and autoproducer plants are included here.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Oil refineries</b>                     | <i>Oil refineries</i> shows the use of primary energy for the manufacture of finished oil products and the corresponding output. Thus, the total reflects transformation losses. In certain cases the data in the total column are positive numbers. This can be due to either problems in the primary refinery balance or to the fact that the IEA uses regional net calorific values for oil products.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Other transformation</b>               | <i>Other transformation</i> covers non-specified transformation not shown elsewhere, such as the transformation of primary solid biofuels into charcoal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Energy industry own use</b>            | <i>Energy industry own use</i> contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes [ISIC 05, 06, 19 and 35, Group 091 and Classes 0892 and 0721].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Losses</b>                             | <i>Losses</i> includes losses in energy distribution, transmission and transport.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Total final consumption (TFC)</b>      | <i>Total final consumption (TFC)</i> is the sum of consumption by the different end-use sectors. Backflows from the petrochemical industry are not included in final consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Industry</b>                           | <p><i>Industry</i> consumption is specified in the following subsectors (energy used for transport by industry is not included here but reported under transport):</p> <ul style="list-style-type: none"> <li>■ <i>Iron and steel industry</i> [ISIC Group 241 and Class 2431];</li> <li>■ <i>Chemical and petrochemical industry</i> [ISIC Divisions 20 and 21] excluding petrochemical feedstocks;</li> <li>■ <i>Non-ferrous metals</i> basic industries [ISIC Group 242 and Class 2432];</li> <li>■ <i>Non-metallic minerals</i> such as glass, ceramic, cement, etc. [ISIC Division 23];</li> <li>■ <i>Transport equipment</i> [ISIC Divisions 29 and 30];</li> <li>■ <i>Machinery</i> comprises fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 25 to 28];</li> </ul> |

- Industry (ctd.)**
- *Mining (excluding fuels) and quarrying* [ISIC Divisions 07 and 08 and Group 099];
  - *Food and tobacco* [ISIC Divisions 10 to 12];
  - *Paper, pulp and printing* [ISIC Divisions 17 and 18];
  - *Wood and wood products* (other than pulp and paper) [ISIC Division 16];
  - *Construction* [ISIC Divisions 41 to 43];
  - *Textile and leather* [ISIC Divisions 13 to 15];
  - *Non-specified* (any manufacturing industry not included above) [ISIC Divisions 22, 31 and 32].
- Transport** *Transport* includes all fuels used for transport [ISIC Divisions 49 to 51]. It includes transport in industry and covers domestic aviation, road, rail, pipeline transport, domestic navigation and non-specified transport. Fuel used for ocean, coastal and inland fishing (included under fishing) and military consumption (included in other non-specified) are excluded from transport. Please note that international marine and international aviation bunkers are also included here for world total.
- Other** *Other* covers residential, commercial and public services [ISIC Divisions 33, 36-39, 45-47, 52, 53, 55, 56, 58-66, 68-75, 77-82, 84 (excluding Class 8422), 85-88, 90-99], agriculture/forestry [ISIC Divisions 01 and 02], fishing [ISIC Division 03] and non-specified consumption.
- Non-energy use** *Non-energy use* covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. Non-energy use also includes petrochemical feedstocks. Non-energy use is shown separately in final consumption under the heading *non-energy use*.

## Unit abbreviations

|              |                                   |             |                                                |
|--------------|-----------------------------------|-------------|------------------------------------------------|
| <b>bcm</b>   | billion cubic metres              | <b>MBtu</b> | million British thermal units                  |
| <b>Gcal</b>  | gigacalorie                       | <b>Mt</b>   | million tonnes                                 |
| <b>GCV</b>   | gross calorific value             | <b>Mtoe</b> | million tonnes of oil equivalent               |
| <b>GW</b>    | gigawatt                          | <b>MWh</b>  | megawatt hour                                  |
| <b>GWh</b>   | gigawatt hour                     | <b>PPP</b>  | purchasing power parity                        |
| <b>kb/cd</b> | thousand barrels per calendar day | <b>t</b>    | metric ton = tonne = 1 000 kg                  |
| <b>kcal</b>  | kilocalorie                       | <b>TJ</b>   | terajoule                                      |
| <b>kg</b>    | kilogramme                        | <b>toe</b>  | tonne of oil equivalent = 10 <sup>7</sup> kcal |
| <b>kJ</b>    | kilojoule                         | <b>TWh</b>  | terawatt hour                                  |
| <b>kWh</b>   | kilowatt hour                     | <b>USD</b>  | United States dollar                           |

## Geographical coverage

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OECD<sup>1</sup></b>            | Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.                                                             |
| <b>Middle East</b>                 | Bahrain, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Yemen.                                                                                                                                                                                                                                                           |
| <b>Non-OECD Europe and Eurasia</b> | Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus <sup>2</sup> , Former Yugoslav Republic of Macedonia, Georgia, Gibraltar, Kazakhstan, Kosovo <sup>3</sup> , Kyrgyzstan, Latvia <sup>4</sup> , Lithuania, Malta, Republic of Moldova, Montenegro <sup>3</sup> , Romania, Russian Federation, Serbia <sup>3</sup> , Tajikistan, Turkmenistan, Ukraine and Uzbekistan. |
| <b>China</b>                       | People's Republic of China and Hong Kong (China).                                                                                                                                                                                                                                                                                                                                                            |
| <b>Asia</b>                        | Bangladesh, Brunei Darussalam, Cambodia, India, Indonesia, Democratic People's Republic of Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, Viet Nam and Other Asia.                                                                                                                                                                        |
| <b>Non-OECD Americas</b>           | Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Curaçao <sup>5</sup> , Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela and Other Non-OECD Americas.                                                                                                                              |
| <b>Africa</b>                      | Algeria, Angola, Benin, Botswana, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Kenya, Libya, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Senegal, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Zambia, Zimbabwe and Other Africa.                                                                                        |

1. OECD includes Estonia and Slovenia starting in 1990. Prior to 1990, data for these two countries are included in Non-OECD Europe and Eurasia.

2. Note by Turkey:

The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union:

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

3. Serbia includes Kosovo from 1990 to 1999 and Montenegro from 1990 to 2004.

4. Latvia was not an OECD Member at the time of the preparation of this publication. Accordingly, Latvia does not appear in the list of OECD Members and is still included in the non-OECD aggregate.

5. The Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent countries, Curaçao and Sint Maarten, with the other islands joining the Netherlands. However, due to a lack of detailed data, the IEA secretariat's data and estimates under the Netherlands Antilles still refer to the whole territory of the Netherlands Antilles as it was known prior to 10 October 2010 up to the end of 2011. Data refer only to the island of Curaçao from 2012. The other islands of the former Netherlands Antilles are added to Other Non-OECD Americas from 2012.

Note: The countries listed above are those for which the IEA secretariat has direct statistics contacts. This document is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. In this publication "country" refers to country or territory, as the case may be.

# Statistics publications

---

## Eight annual publications

---

### World Energy Statistics 2016

---

A new publication from the IEA presenting comprehensive world energy statistics, previously presented in *Energy Statistics of OECD Countries* and *Energy Statistics of Non-OECD Countries*, *World Energy Statistics* contains detailed data on all energy sources – coal, gas, oil, electricity, renewables and waste. It covers energy supply and consumption for 150 countries and regions, including all OECD countries, over 100 other key energy producing and consuming countries, as well as world and regional totals. The book includes detailed tables by country in original units for the year 2014, and summary time series on production, trade, and final consumption by sector. It also presents provisional 2015 supply data for OECD countries, and initial 2015 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

*Published August 2016 - Price: Print €120; PDF €96*

### World Energy Balances 2016

---

A new release from the IEA presenting comprehensive energy balances for all the world's largest energy producing and consuming countries, *World Energy Balances* is formed by merging *Energy Balances of OECD Countries* and *Energy Balances of Non-OECD Countries*, previously published separately. The volume contains detailed data on the supply and consumption of energy for all OECD countries, over 100 other key energy producing and consuming countries, as well as world and regional totals. The book includes graphs and detailed data by country for all energy sources – coal, gas, oil, electricity, renewables and waste - expressed in balance format, for the year 2014. Alongside this, there are summary time series on production, trade, final consumption by sector, as well as key energy and economic indicators. The volume also presents provisional 2015 supply data for OECD countries, and initial 2015 estimates for non-OECD countries' production and trade of natural gas, primary coal and oil.

*Published August 2016 - Price: Print €120; PDF €96*

## Electricity Information 2016

---

*Electricity Information* provides a comprehensive review of historical and current market trends in the OECD electricity sector, including 2015 provisional data. It provides an overview of the world electricity developments in 2014 covering world electricity and heat production, input fuel mix, supply and consumption, and electricity imports and exports. More detail is provided for the 34 OECD countries with information covering production, installed capacity, input energy mix to electricity and heat production, consumption, electricity trades, input fuel prices and end-user electricity prices. It provides comprehensive statistical details on overall energy consumption, economic indicators, electricity and heat production by energy form and plant type, electricity imports and exports, sectoral energy and electricity consumption, as well as prices for electricity and electricity input fuels for each country and regional aggregate.

*Published August 2016 - Price: Print €150; PDF €120*

## Coal Information 2016

---

*Coal Information* provides a comprehensive review of historical and current market trends in the world coal sector, including 2015 provisional data. It provides a review of the world coal market in 2015, alongside a statistical overview of developments, which covers world coal production and coal reserves, coal demand by type, coal trade and coal prices. A detailed and comprehensive statistical picture of historical and current coal developments in the 34 OECD member countries, by region and individually is presented in tables and charts. Complete coal balances and coal trade data for selected years are presented on 22 major non-OECD coal-producing and -consuming countries, with summary statistics on coal supply and end-use statistics for about 40 countries and regions worldwide.

*Published August 2016 - Price: Print €165; PDF €132*

## Natural Gas Information 2016

---

*Natural Gas Information* is a detailed reference work on gas supply and demand covering not only the OECD countries but also the rest of the world, this publication contains essential information on LNG and pipeline trade, gas reserves, storage capacity and prices.

The main part of the book concentrates on OECD countries, showing a detailed supply and demand balance for each country and for the three OECD regions: Americas, Asia-Oceania and Europe, as well as a breakdown of gas consumption by end user. Import and export data are reported by source and destination.

*Published August 2016 - Price: Print €165; PDF €132*

## Oil Information 2016

---

*Oil Information* is a comprehensive reference book on current developments in oil supply and demand. This publication contains key data on world production, trade, prices and consumption of major oil product groups, with time series back to the early 1970s.

Its core consists of a detailed and comprehensive picture of oil supply, demand, trade, production and consumption by end-user for each OECD country individually and for the OECD regions. Trade data are reported extensively by origin and destination.

*Published August 2016 - Price: Print €165; PDF €132*

## Renewables Information 2016

---

*Renewables Information* provides a comprehensive review of historical and current market trends in OECD countries, including 2015 provisional data. It provides an overview of the development of renewables and waste in the world over the 1990 to 2014 period. A greater focus is given to the OECD countries with a review of electricity generation and capacity from renewable and waste energy sources, including detailed tables. However, an overview of developments in the world and OECD renewable and waste market is also presented. The publication encompasses energy indicators, generating capacity, electricity and heat production from renewable and waste sources, as well as production and consumption of renewables and waste.

*Published August 2016 - Price: Print €110; PDF €88*

## CO<sub>2</sub> Emissions from Fuel Combustion 2016

---

In recognition of the fundamental importance of understanding energy related environmental issues, the IEA *CO<sub>2</sub> Emissions from Fuel Combustion* provides a full analysis of emissions stemming from energy use. This annual publication has become an essential tool for analysts and policy makers in many international fora such as the Conference of the Parties, which will be meeting in Marrakesh, Morocco, from 7 to 18 November 2016.

The data in this book are designed to assist in understanding the evolution of the emissions of CO<sub>2</sub> from 1971 to 2014 for 150 countries and regions by sector and by fuel. Emissions were calculated using IEA energy databases and the default methods and emission factors from the 2006 *IPCC Guidelines for National Greenhouse Gas Inventories*.

*Published November 2016 - Price: Print €165; PDF €132*

## Two quarterlies

---

### Oil, Gas, Coal and Electricity

---

This publication provides up-to-date, detailed quarterly statistics on oil, coal, natural gas and electricity for OECD countries. Oil statistics cover production, trade, refinery intake and output, stock changes and consumption for crude oil, NGL and nine selected oil product groups. Statistics for electricity, natural gas and coal show supply and trade. Import and export data are reported by origin and destination. The gas trade data from 1st quarter 2011 onwards corresponds to physical flows (entries/exits). Moreover, oil as well as hard coal and brown coal production are reported on a worldwide basis.

*Published Quarterly - Price: single edition Print €120;  
annual subscription Print € 380;  
single edition PDF €96;  
annual subscription PDF € 304*

### Energy Prices and Taxes

---

This publication responds to the needs of the energy industry and OECD governments for up-to-date information on prices and taxes in national and international energy markets. It contains crude oil import prices by crude stream, industry prices and consumer prices. The end-user prices for OECD member countries cover main petroleum products, gas, coal and electricity. Every issue includes full notes on sources and methods and a description of price mechanisms in each country. Time series availability varies with each data series.

*Published Quarterly - Price: single edition Print €120;  
annual subscription Print € 380;  
single edition PDF €96;  
annual subscription PDF € 304*

## Electronic editions

### CD-ROMs and Online Data Services

To complement its publications, the Energy Data Centre produces CD-ROMs containing the complete databases which are used for preparing the statistics publications. State-of-the-art software allows you to access and manipulate all these data in a very user-friendly manner and includes graphic facilities. These databases are also available on the internet from our online data service.

#### ■ Annual CD-ROMS / Online Databases

- |                                                        |                      |
|--------------------------------------------------------|----------------------|
| • World Energy Statistics 2016                         | Price: €800          |
| • World Energy Balances 2016                           | Price: €800          |
| • <b>World Energy Statistics and Balances 2016</b>     | <b>Price: €1 400</b> |
| <i>(Combined subscription of the above two series)</i> |                      |
| • Electricity Information 2016                         | Price: €550          |
| • Coal Information 2016                                | Price: €550          |
| • Natural Gas Information 2016                         | Price: €550          |
| • Oil Information 2016                                 | Price: €550          |
| • Renewables Information 2016                          | Price: €400          |
| • CO <sub>2</sub> Emissions from Fuel Combustion 2016  | Price: €550          |

#### ■ Quarterly CD-ROMs / Online Databases

- |                           |                             |
|---------------------------|-----------------------------|
| • Energy Prices and Taxes | Price: (four quarters) €900 |
|---------------------------|-----------------------------|

A description of these services is available on our website:

**<http://data.iea.org>**

All the annual and quarterly online databases are also accessible over the internet on a pay-per-view basis. The databases can be accessed either for a single data point or for time series.

## Other online services

---

### The Monthly Oil Data Service

---

The IEA *Monthly Oil Data Service* provides the detailed databases of historical and projected information which is used in preparing the IEA monthly *Oil Market Report (OMR)*. The IEA *Monthly Oil Data Service* comprises three packages available separately or combined as a subscriber service on the Internet. The data are available at the same time as the official release of the *Oil Market Report*.

The packages include:

- |                                       |                      |
|---------------------------------------|----------------------|
| • Supply, Demand, Balances and Stocks | Price: €6 150        |
| • Trade                               | Price: €2 050        |
| • Field-by-Field Supply               | Price: €3 150        |
| • <b>Complete Service</b>             | <b>Price: €9 200</b> |

A description of this service is available on our website:

**[www.iea.org/statistics/mods](http://www.iea.org/statistics/mods)**

### The Monthly Gas Data Service

---

The *Monthly Gas Data Service* provides monthly natural gas data for OECD countries:

- Supply balances in terajoules and cubic metres;
- Production, trade, stock changes and levels where available, gross inland deliveries, own use and losses;
- Highly detailed trade data with about 50 import origins and export destinations;
- LNG trade detail available from January 2002;
- From 2011 onwards, transit volumes are included and trade data corresponds to entries/exits.

The databases cover the time period January 1984 to current month with a time lag of two months for the most recent data.

- |                                                                                                |             |
|------------------------------------------------------------------------------------------------|-------------|
| • Monthly Gas Data Service: Natural Gas Balances & Trade<br>Historical plus 12 monthly updates | Price: €800 |
|------------------------------------------------------------------------------------------------|-------------|

A description of this service is available on our website:

**[www.iea.org/statistics/mgds](http://www.iea.org/statistics/mgds)**

The IEA statistics website contains a wealth of free statistics covering oil, natural gas, coal, electricity, renewables, energy-related CO<sub>2</sub> emissions and more for over 140 countries and historic data for the last 20 years. It also contains Sankey flows to enable users to explore visually how a country's energy balance shifts over up to 40 years, starting with production and continuing through transformation to see important changes in supply mix or share of consumption. The website also includes a range of monthly data.

The IEA statistics site can be accessed at:

**[www.iea.org/statistics/](http://www.iea.org/statistics/)**

***Note:** The prices quoted for Electronic Editions are for single-user licences. Please contact us for information on multi-user licence prices.*

For more information, please feel free to contact the Energy Data Centre of the IEA at [stats@iea.org](mailto:stats@iea.org)

**INTERNATIONAL ENERGY AGENCY**  
9, rue de la Fédération,  
75739 Paris Cedex 15 - France

# Key world energy statistics

A wealth of  
**ENERGY  
STATS**  
at your  
fingertips



**IEA ENERGY  
STATS:**  
download it for  
free on your  
iPhone, iPad,  
Android device or  
Windows Phone



**International  
Energy Agency**  
Secure  
Sustainable  
Together

# 2016

## Oil Market Report

---

**Each month, *the* primary source of data on supply, demand, stocks, prices and refining**

Since its appearance in 1983, the International Energy Agency's *Oil Market Report (OMR)* has become *the* definitive source of information on world oil market fundamentals, covering supply, demand, OECD stocks, prices and refining as well as OECD and selected non-OECD trade.

The *OMR* provides the most extensive, up-to-date statistical data available on current world oil market trends. It is the first and exclusive source to present official government statistics from all OECD countries, as well as selected data from non-OECD countries.

The main market movements of the month are highlighted in a convenient summary, while detailed analysis explains recent market developments and provides an insight into the months ahead. It is the *only* regular short-term analysis of the oil industry available based on information obtained from the extensive IEA network of contacts with government and industry.

The *OMR* provides both historical data and supply/demand forecasts for the year ahead. Featuring tables, graphs and statistics, it provides all the data and analysis necessary to track the oil market and to identify trends in production, consumption, refining, inventories in OECD countries and prices for both crude and products.

Additionally, subscribers to the *OMR* receive a copy of the annual *Medium-Term Oil Market Report (MTOMR)* which examines key industry themes. These include the impact of the global economic slowdown on oil demand, upstream and downstream investment levels, the likely pace of development of biofuels and non-conventional oil supplies, likely oil products availability and oil price formation. The *MTOMR* provides detailed supply and demand forecasts for crude oil and oil products looking five years forward, and since its inception in 2006 the report has become a standard industry reference.

To subscribe electronically, please see our website at  
[www.oilmarketreport.org](http://www.oilmarketreport.org)

Annual subscription rate for single electronic copy: €2 200

## World Energy Outlook 2016

The successful outcome of COP21 has raised hopes and expectations of concerted global efforts to tackle climate change, but how will this affect the efficiency and carbon footprint of the energy sector? When and how will market dynamics change for oil, natural gas and coal – or might lower prices for some fuels be here to stay? How can governments address the impact of local pollution, often energy-related, on air quality?

The *World Energy Outlook 2016 (WEO-2016)* series – including a special report in June and the full Outlook in November – will seek to shed light on these questions and more, all with the customary mix of rigorous quantitative modelling and insightful analysis. The *WEO-2016* series will include a particular focus on the following topical issues:

- **The impact of COP21:** *WEO-2016* will track progress with the implementation of the different country climate pledges made in Paris and judge what they mean for long-term energy trends. Based on this assessment, it will examine and present policy options to bridge the gap and reach climate objectives in full.
- **Major focus on renewables:** renewable energy is vital to steer the energy system to the lowcarbon future envisioned in the Paris agreement. This analysis will assess the rapid improvement in the competitiveness and economics of renewables, relative to fossil-fuels and other low carbon options, as well as the opportunities and questions that a rising share of renewable energy open up for the energy system as a whole.
- **The road ahead for fossil fuels:** coal, oil and natural gas remain the bedrock of global energy use but all face an uncertain period of adjustment, both to today's market conditions and – over the longer term – to the prospect of a new policy landscape post-COP21. With lower prices bringing down the axe on many new projects, *WEO-2016* will assess the impact on tomorrow's market balances and the different pathways and risks that lie further ahead.
- **Mexico's energy outlook:** the comprehensive energy reform package passed in Mexico will have profound effects on the country's energy sector development. This analysis will evaluate the potential impact of the reforms for Mexico's upstream as well as its power sector and wider economy.
- **Energy and water:** are interdependent. This analysis will assess current and future freshwater requirements for energy production and the amount of energy required for the water sector, highlighting potential vulnerabilities and key stress points.
- **Special Report on Energy and Air Pollution** (Released in June 2016): Energy-related air pollution leads to millions of premature deaths and costs the global economy trillions of dollars each year; with growing demand for energy services in the future, the already high costs of air pollution risk increasing dramatically. This special report, the first of its kind, will provide new analysis to help decision-makers tackle an issue of pressing social and political concern.

For more information please visit our website:

[www.worldenergyoutlook.org](http://www.worldenergyoutlook.org)

Order now at [www.iea.org/books](http://www.iea.org/books)  
or by emailing [books@iea.org](mailto:books@iea.org) Price: €150

© OECD/IEA, 2016

## International Energy Agency (IEA)

Head of Communication and Information Office

9, rue de la Fédération, 75739 Paris Cedex 15, France.

Please note that this publication is subject to specific restrictions  
that limit its use and distribution.

The terms and conditions are available online at  
[www.iea.org/t&c](http://www.iea.org/t&c)

Typesetted in France by Desk, September 2016

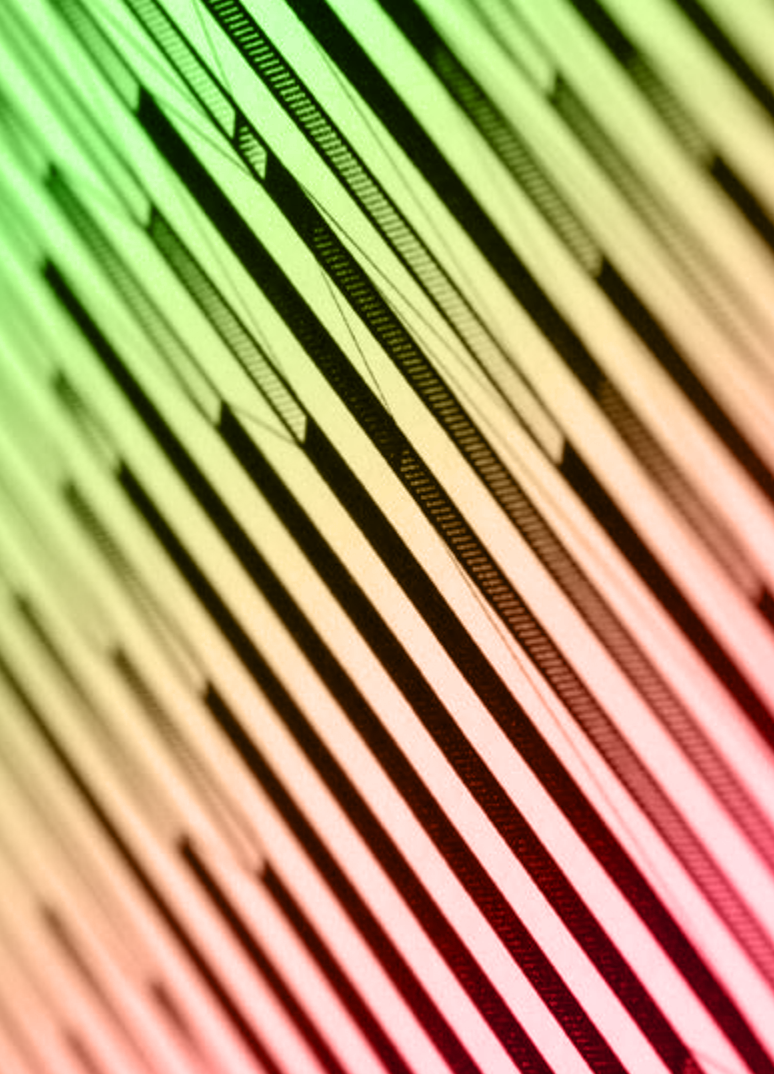
Cover design: IEA, Photo credits: © GraphicObsession

Inside photos: Pages 11, 13, 17, 21 and 25 - © Photodisc

Pages 15 and 27 - © Brand X

Pages 19 and 23 - © Digital Stock

IEA/OECD possible corrigenda on: [www.oecd.org/about/publishing/corrigenda.htm](http://www.oecd.org/about/publishing/corrigenda.htm)



International  
Energy Agency  
Secure  
Sustainable  
Together

9, rue de la Fédération  
75739 Paris Cedex 15  
[www.iea.org](http://www.iea.org)