

ENERGY PRICES AND TAXES

DOCUMENTATION FOR BEYOND 2020 FILES

DATA FOR NON-OECD COUNTRIES

*(discontinued after
1st Quarter 2012)*

The documentation in this file accompanies a Beyond 2020 file. This file presents the data for non-OECD countries which were issued in the 1st Quarter 2012 Beyond 2020 version of Energy Prices and Taxes, the last edition in which data for non-OECD countries were included. There is no intention to update the data for the foreseeable future (see note below).

Please refer to current editions of Energy Prices and Taxes for general documentation.

Due to reductions in its annual budget, the IEA no longer has adequate resources to provide complete information on energy prices and taxes and so had to suppress certain sections of its quarterly Energy Prices and Taxes publication as of 1 January 2012. As a result, some price series were discontinued following the 2nd quarter 2012 edition.

The series concerned are natural gas and LNG import prices, coal import and export prices and end-use prices for all non-OECD countries. The IEA considered it necessary to reduce the coverage of this publication in order to maintain the high quality of the remaining information in Energy Prices and Taxes. We are hopeful that we may be able to restore these sections in the future if resources become available.

All enquiries relating to methodology or coverage should be addressed to prices@iea.org.

IEA Energy Data Centre
October 2013

Database Description

There is one file only, NMC_END_ALL, which regroups data for 18 non-OECD countries that were shown separately in three B2020 files until the 1st Quarter 2012 edition of Energy Prices and Taxes (these files were END_NC.IVT, END_TOE.IVT, END_US.IVT):

| | |
|---|--|
| NMC_END_ALL (data formerly in END_NC.IVT) | End-use energy prices and taxes in national currencies Energy end-use ex-tax prices, excise taxes, value added rates and taxes, total taxes and total prices including taxes; by sector (industry, households and electricity generation), by energy product (6 price measures, 3 sectors, 14 energy product categories). Unit: National currency / energy unit. Time: annual 1978-2011; quarterly 1Q1978-4Q2011. |
| (data formerly in END_TOE.IVT) | End-use energy prices and taxes in national currencies per toe Energy end-use ex-tax and total prices; by sector (industry, households and electricity generation), by energy product (2 price measures, 3 sectors, 14 energy product categories). Unit: National currency / toe. Time: annual 1978-2011; quarterly 1Q1978-4Q2011. |
| (data formerly in END_US.IVT) | End-use energy prices and taxes in US dollars Energy end-use ex-tax and total prices; by sector (industry, households and electricity generation), by energy product, expressed in US dollars converted using average exchange rates per energy unit and per tonnes of oil equivalent – and in US dollars, converted using annual purchasing power parities (PPPs) per energy unit and per tonnes of oil equivalent (6 price measures, 3 sectors, 14 energy product categories). Unit: US dollars / energy unit ; US dollars / toe. Time: annual 1978-2011; quarterly 1Q1978-4Q2011. |

Country Coverage

| | |
|-----------------------------|--------------------|
| Bulgaria | Latvia |
| China, People's Republic of | Lithuania |
| Chinese Taipei | Malta |
| Croatia | Pakistan |
| Cyprus | Romania |
| Ghana | Russian Federation |
| India | Singapore |
| Indonesia | South Africa |
| Kazakhstan | Thailand |

BULGARIA

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

VAT was enacted into Bulgarian law in October 1993, to replace a communist tax on turnover, and was implemented in April 1994.

| From | To | % |
|----------|----------|----|
| 01.04.94 | 31.12.95 | 18 |
| 01.01.96 | 31.12.98 | 22 |
| 01.01.99 | now | 20 |

OIL PRODUCTS

Prices shown are the prices most frequently charged, based on a weighted average, reported to administration by Lukoil-Neftochim Burgas refinery.

Source: Prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Heavy fuel oil

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year.

Excise tax: As shown in excise tax column.

Specifications:

High sulphur fuel oil

Sulphur content: > 1%

Light fuel Oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration).

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Automotive diesel oil

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Automotive gas oil

Gasoline

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Unleaded premium 95 RON gasoline

Quality: Euro Super 95

Automotive LPG

Pump prices.

Excise tax: As shown in excise tax column.

NATURAL GAS

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008. Data are biannual, therefore, prices for 1Q and 2Q are the same, as are 3Q and 4Q.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ELECTRICITY

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ENERGY PRICE INDICES

Annual indices are 12-month averages. Quarterly indices refer to the three-month average.

Source: Eurostat, Harmonised indices of consumer prices (HICP).

Oil products

Retail: HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Retail: HICP, electricity (cp0451).

Natural gas

Retail: HICP, gas (cp0452).

Coal

Retail: HICP, solid fuels (cp0454).

PEOPLE'S REPUBLIC OF CHINA

GENERAL NOTES

Prices refer to average market prices for 35 major cities except for automotive diesel for non-commercial use and regular unleaded gasoline, where prices are for Beijing.

General tax (VAT)

| | % |
|----------------------|----|
| Coal and natural gas | 13 |
| Oil products | 17 |

Sources: Beijing Energy Efficiency Centre unless otherwise specified.

OIL PRODUCTS

Heavy fuel oil for industry

Specifications

Quality: No. 250 Heavy fuel oil, vacuum residuum

Sources: Beijing Energy Efficiency Centre. Published: *China Energy Databook*, Pacific Northwest National Laboratory.

Light fuel oil for households

Specifications

Quality: Kerosene for lighting

Sources: Beijing Energy Efficiency Centre. Published: *China Energy Databook*, Pacific Northwest National Laboratory.

Automotive diesel for commercial use

Specifications

Quality: Light diesel oil no. 0 for Public Transport Use (commercial)

Sources: From 2001 onwards, *China Petroleum Data Monthly*, China Economic Information Service, Xinhua News Agency. From 1995 until 2000, Beijing Energy Efficiency Centre. Prior to 1995, *China Energy Databook*, Pacific Northwest National Laboratory.

Automotive diesel for non-commercial use

Specifications

Quality: Light diesel oil no. 0 (non-commercial)

Source: *China Petroleum Data Monthly*, China Economic Information Service, Xinhua News Agency.

Gasoline

Specifications

Unleaded premium

Quality: Unleaded premium gasoline
Grade: 97 RON

Leaded premium

Quality: Leaded premium gasoline
Grade: 90 RON

Unleaded regular

Quality: Unleaded regular gasoline
Grade: 90 RON

Sources: For unleaded and leaded premium, Beijing Energy Efficiency Centre. Published: *China Energy Databook*, Pacific Northwest National Laboratory. For unleaded regular, *China Petroleum Data Monthly*, China Economic Information Service, Xinhua News Agency.

NATURAL GAS

Prices refer to natural gas from gas fields (industrial use).

COAL

From 1996 onwards, more than two-thirds of the coal prices have been opened to the market. However, prices for electricity generation are still supervised by the government. From January 1994 to December 1995, the coal prices were in the process of liberalisation. Prior to January 1994, China operated a dual pricing system for coal. Under this arrangement there were two types of coal: "allocated coal" (plan prices fixed or state mine production) produced from state, provincial and country mines; and "free market coal" (sold at negotiated prices) produced by small township mines. Prices varied according to regional supply/demand situations.

Steam coal for industry

Specifications

Quality: Anthracite

Sources: From 1997 onwards, Beijing Energy Efficiency Centre. Prior to 1997, *China Energy Databook*, Pacific Northwest National Laboratory.

Steam coal for households

Specifications

Quality: Ordinary bituminous coal
NCV: 4 990 kcal/kg (assumed)

Sources: From 1995 onwards, Beijing Energy Efficiency Centre. Prior to 1995, *China Energy Databook*, Pacific Northwest National Laboratory.

Coking coal

Specifications

Quality: Metallurgical coke
Diameter: > 40mm
NCV: 6 800 kcal/kg (assumed)

Sources: Beijing Energy Efficiency Centre. Published: *China Energy Databook*, Pacific Northwest National Laboratory.

ELECTRICITY

Industry

Prices refer to electricity for ordinary industry and are a nationally regulated single price.

Sources: From 1996 onwards, *Electric Power Industry in China*. *China Energy Databook*, Pacific Northwest National Laboratory.

Households

Source: *Electric Power Industry in China*.

ENERGY PRICE INDICES

Source: *China Statistical Yearbook* (various editions), compiled by National Bureau of Statistics of China.

Oil products

Wholesale: Producer Price Indices for Manufactured Goods by Sector - Petroleum Industry.

Electricity

Wholesale: Producer Price Indices for Manufactured Goods by Sector - Power Industry.

Natural gas

Wholesale: Producer Price Indices for Manufactured Goods by Sector - Production & Supply of Gas.

Coal

Wholesale: Producer Price Indices for Manufactured Goods by Sector - Coal Industry.

CHINESE TAIPEI

GENERAL NOTES

From 1Q91 onwards, quarterly prices refer to the three-month average. Prior to 1Q91, prices refer to end-year and end-quarter.

General tax (VAT)

| From | To | % |
|----------|-----|---|
| 01.04.86 | now | 5 |

Sources: Bureau of Energy, Ministry of Economic Affairs, Republic of China unless otherwise specified. Data published: *Energy Indicators Quarterly*, Taiwan Area of the Republic of China.

OIL PRODUCTS

Excise tax: Applies to fuel oils. The excise amount is applied to the "appraisal value" price (approximately 88% of the ex-tax price).

| From | To | Amount |
|----------|----------|-----------------------|
| 01.07.93 | 30.06.95 | 3% of appraisal value |
| 01.07.95 | 12.10.01 | 105 TWD/klitre |
| 13.10.01 | now | 110 TWD/klitre |

High sulphur fuel oil for industry

Due to the environmental regulation, the usage of fuel oil containing over 0.5% sulphur has been prohibited in Taiwan since July 2008. HSFO was not on market anymore thereafter.

Specifications

Density: 0.942 t/kl
 NCV: 9 200 kcal/l
 Sulphur content:

| From | To | % |
|----------|----------|-----|
| 01.01.80 | 31.12.86 | 3.5 |
| 01.01.87 | 31.12.89 | 2.0 |
| 01.01.90 | 30.06.93 | 1.5 |
| 01.07.93 | now | 1.0 |

Low sulphur fuel oil for industry

Produced and consumed since 1 July 1993.

Specifications

Density: 0.93 t/kl
 Sulphur content: 0.5%
 NCV: 9 500 - 12 000 kcal/l

Fuel oil for electricity generation

Specifications

Quality: Fuel oil C
 Sulphur content: 1%
 Density: 0.953 t/kl
 NCV: 9 200 kcal/l

Light fuel oil for industry

Excise tax: As shown in excise tax column.

Specifications

Quality: Low sulphur light fuel oil
 Sulphur content: 1% (up to 1Q07)
 0.5% (since 2Q07)
 Density: 0.89 - 0.90 t/kl
 NCV: 9 800 - 12 000 kcal/l

Automotive diesel oil

Excise tax

| From | To | Amount |
|----------|----------|------------------------|
| 01.01.89 | 20.01.94 | 60% of appraisal value |
| 21.01.94 | 24.02.94 | 65% of appraisal value |
| 25.02.94 | 30.06.95 | 75% of appraisal value |
| 01.07.95 | 12.10.01 | 3.8 TWD/kl |
| 13.10.01 | now | 3.99 TWD/kl |

Specifications

NCV: 8 800 kcal/l
 Density: 0.81-0.82 t/kl
 Cetane number: 46

Premium Diesel Oil

Sulphur Content: < 0.3%

Prices represent diesel used for both commercial and non-commercial purposes.

Gasoline

Excise tax

| From | To | Amount |
|----------|----------|------------------------|
| 14.02.92 | 20.01.94 | 75% of appraisal value |
| 21.01.94 | 24.02.94 | 82% of appraisal value |
| 25.02.94 | 30.06.95 | 90% of appraisal value |
| 01.07.95 | 12.10.01 | 6.5 TWD/litre |
| 13.10.01 | now | 6.83 TWD/litre |

Specifications

NCV: 11 000 kcal/l
 Density: 0.84 t/kl

Premium leaded and premium unleaded

Octane: 95 RON and 98 RON

*Regular unleaded*Octane: 92 RON (1988 onwards)
82 RON (1982 - 1987)**NATURAL GAS****Industry and households**

Industry prices refer to the regions of Hsinchu and Miao Li.

Household prices refer to the region of Taipei.

Specifications

Quality: Natural gas (fuel)

NCV

| From | To | kcal/ m ³ | kWh/ m ³ |
|------|------|-------------------------|------------------------|
| 1954 | 1990 | 9 000 | 10.467 |
| 1991 | now | 8 900 | 10.351 |

Electricity generation

Prices refer to imported liquefied natural gas (LNG).

SpecificationsNCV: 9 900 kcal/m³ (11.514 kWh/m³)**COAL****Specifications**

NCV: 7 000 kcal/kg

Steam coal for industry

Prices refer to the median of the following market selling prices for each period:

| Year | TWD/ tonne |
|-------------|---------------|
| 1984 | 2 400 - 2 600 |
| 1985 | 2 300 - 2 600 |
| 1986 | 2 500 - 2 650 |
| 1987 - 1989 | 2 450 - 2 650 |

| Year | TWD/ tonne |
|-------------|---------------|
| 1990 | 2 200 - 2 500 |
| 1991 - 2000 | 2 000 - 2 610 |

From 2001 onwards, coal is no longer produced in mines in Chinese Taipei.

Steam coal for electricity generation

Prices shown are annual average expenditure incurred by TPC and other governmental organisations.

Source: Bureau of Energy, Ministry of Economic Affairs; the data are supplied by the Taiwan Power Company, Taipei.**ELECTRICITY****Special taxes**

| From | To | % | Type of tax |
|----------|----------|------|------------------|
| 01.01.80 | 31.03.86 | 0.60 | Business tax |
| | | 0.40 | Stamp tax |
| | | 0.15 | Education Surtax |
| 01.04.86 | now | 5.00 | VAT |

Prices shown for industry and households are derived from calendar year average revenues per MWh for power (industry) and for light (households).

Source: TPC, Taipei.**ENERGY PRICE INDICES****Source:** Correspondence with the Bureau of Energy, Ministry of Economic Affairs, Republic of China.**Oil products**

Retail: Weighted average of premium gasoline and premium diesel oil.

Electricity

Retail: Lighting.

Natural gas

Retail: Natural gas (fuel).

CROATIA

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

Sources: Energy Institute Hrvoje Pozar, *Energy in Croatia, Annual Report, 2009*, and previous versions.

Prices shown are the prices most frequently charged, based on a weighted average.

VAT came into effect in Croatia on 1 January 1998; it replaced a single stage retail tax. Before VAT, a single stage retail tax applied in Croatia as a general consumption tax.

| From | To | % |
|----------|----------|----|
| 01.01.98 | 31.07.09 | 22 |
| 01.08.09 | now | 23 |

OIL PRODUCTS

Prices shown are the prices most frequently charged, based on a weighted annual average. Total prices are inclusive of VAT.

Automotive diesel oil

Pump prices. Automotive diesel for commercial users is the price for agriculture and fishing.

Specifications:

Density: 0.845 t/kl
Sulphur content: ≤ 0.001%

Gasoline

Pump prices.

Specifications:

Grade and Octane: Premium unleaded 98 RON
Premium unleaded 95 RON
Lead content: ≤ 0.005 g/litre

NATURAL GAS

Prices shown refer to average selling prices of natural gas for all distribution companies in the Republic of Croatia. Prices have been converted into MWh GCV by the IEA secretariat, using standard conversion factors. The total prices are inclusive of VAT.

COAL

Prices refer to the import price, as there is no domestic coal production in Croatia. The total prices are exclusive of VAT.

Specifications:

Steam coal for industry and electricity generation
Quality: Hard coal (Kameni ugljen)

ELECTRICITY

Prices shown refer to the average selling price of electrical energy. The total prices for industry are exclusive of VAT.

CYPRUS

GENERAL NOTES

Conversion to Euro: Prices and taxes prior to 1 January 2008, the date of entry into the Economic and Monetary Union (EMU), have been converted from Cypriot Pounds using the appropriate irrevocable conversion rate of 0.585274 CYP/Euro. This methodology facilitates comparisons within a country over time and ensures that the historical evolution (*i.e.* growth rates) is preserved. However, pre-EMU Euro are a notional unit and are not normally suitable to form area aggregates or to carry out cross-country comparisons.

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

| From | To | % |
|----------|-----|----|
| 01.05.04 | now | 15 |

Source: Unless otherwise specified, published in *Industrial Statistics* by Statistical Service Cyprus. Prices from this source refer to the retail prices at the filling stations, including excise taxes and excluding VAT.

Note by Turkey: With respect to Cyprus, Turkey reserves its position as stated in its declaration of 1 May 2004. The information in this book under the heading 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).

Note by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this book relates to the area under the effective control of the Government of the Republic of Cyprus.

OIL PRODUCTS

Prices shown are the prices most frequently charged, based on a weighted average.

Heavy fuel oil for industry

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year.

Excise tax: As shown in excise tax column.

Specifications:

High sulphur fuel oil

Sulphur content: > 1%

Source: for HSFO used for industry, prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Light fuel oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration).

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Source: prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Automotive diesel oil

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Automotive gas oil

Source: prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Gasoline

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Unleaded premium 95 RON gasoline

Quality: Euro Super 95

Regular leaded gasoline

Quality: Leaded 92 RON

Source: for unleaded (95 RON), prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

ELECTRICITY

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ENERGY PRICE INDICES

Annual indices are 12-month averages. Quarterly indices refer to the three-month average.

Source: Eurostat, Harmonised indices of consumer prices (HICP).

Oil products

Retail: Weighted average of HICP, liquid fuels (cp0453) and HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Retail: HICP, electricity (cp0451).

Natural gas

Retail: HICP, gas (cp0452).

Coal

Retail: HICP, solid fuels (cp0454).

GHANA

GENERAL NOTES

In July 2007, Ghana redenominated its currency, the cedi, at a rate of 1 new Ghana cedi to 10,000 old cedis. Prices are expressed in the new currency, the Ghana Cedi, for all time periods both before and after July 2007.

Sources: National Petroleum Authority.

OIL PRODUCTS

Ex-tax prices refer to ex-refinery prices plus margins.

High sulphur fuel oil

Prices refer to ex-depot residual fuel oil prices.

Specifications:

Density: 0.94 t/kl (assumed)

Light fuel oil

Prices refer to ex-pump kerosene prices.

Automotive diesel oil

Prices refer to ex-pump gas oil prices.

Specifications:

Density: 0.845 t/kl

Sulphur content: $\leq 0.001\%$

Gasoline

Pump prices.

Specifications:

Grade and Octane: Premium gasoline

Liquefied petroleum gas

Pump prices.

Specifications:

Density: 0.542 t/kl (assumed)

INDIA

GENERAL NOTES

Unless specified otherwise, annual prices are based on the Indian fiscal year beginning 1 April. See individual products for more details.

OIL PRODUCTS

Oil product prices and sales tax refer to the Mumbai (Bombay) area, as countrywide average prices and sales tax among the 26 states are not feasible. However, excise tax and customs duties are uniform throughout India. The excise tax contains both an *ad valorem* component and a flat rate component. The percentage part of the excise tax is applied to the price excluding the dealer's commission.

Sales tax is levied as a percentage on the ex-tax price plus excise tax amount, but can also contain an additional surcharge (see individual fuels).

Sources: Ministry of Petroleum and Natural Gas, New Delhi and Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi.

High sulphur fuel oil

Total price is made up of assessable value, excise duty (including an *ad valorem* "education cess") and sales tax. From 1978 - 1981, prices refer to those of 1 January.

General tax (Sales tax)

| From | To | % |
|----------|----------|---------|
| Prior to | 31.03.88 | 4 |
| 01.04.88 | 02.07.96 | 8 |
| 03.07.96 | 01.09.97 | 12 |
| 02.09.97 | 31.03.98 | 8 |
| 01.04.98 | 31.12.00 | 13 |
| 01.01.01 | now | unknown |

Excise tax/Customs duty

| From | To | INR/tonne | INR/kl |
|----------|----------|-----------|--------|
| 01.03.79 | 28.02.88 | 129.8 | 125.92 |
| 01.03.88 | 27.02.93 | 155.4 | 150.71 |
| 28.02.93 | 28.02.94 | 196.0 | 190.00 |
| 01.03.94 | 02.07.96 | 464.0 | 450.00 |
| 03.07.96 | 01.09.97 | 794.0 | 770.00 |
| 02.09.97 | 31.12.97 | 546.0 | 530.00 |
| 01.01.98 | 31.03.98 | 794.0 | 750.50 |
| 01.04.98 | 31.12.98 | 773.0 | 749.80 |
| 01.01.99 | 31.03.99 | 705.9 | 684.70 |
| 01.04.99 | 31.10.99 | 725.8 | 704.00 |

| From | To | INR/tonne | INR/kl |
|----------|----------|-----------|---------|
| 01.11.99 | 31.12.99 | .. | .. |
| 01.01.00 | 31.03.00 | 1422.1 | 1379.46 |
| 01.04.00 | 01.06.00 | 1557.9 | 1511.90 |
| 02.06.00 | 31.12.00 | .. | .. |

For excise tax rates after 2001, see the book tables.

Specifications

| | |
|----------|-------------------------|
| Quality: | Furnace oil (FO) |
| Density: | 0.97 t/kl (assumed) |
| NCV: | 9 600 kcal/kg (assumed) |

Light fuel oil for industry

Total price is made up of assessable value, excise duty (including an *ad valorem* "education cess" and an additional levy along with cess) and sales tax. From 1978 to 1981, prices refer to those of 1 January.

Sales tax

See table for High sulphur fuel oil.

Excise/Customs duty

| From | To | INR/kl |
|----------|----------|---------|
| 01.03.79 | 16.08.79 | 74.15 |
| 17.08.79 | 28.02.88 | 153.96 |
| 01.03.88 | 27.02.93 | 160.91 |
| 28.02.93 | 28.02.94 | 173.02 |
| 01.03.94 | 02.07.96 | 558.76 |
| 03.07.96 | 01.09.97 | 950.00 |
| 02.09.97 | 31.12.98 | 740.00 |
| 01.01.99 | 31.03.99 | 1008.00 |
| 01.04.99 | 31.10.99 | 1139.20 |
| 01.11.99 | 31.12.99 | .. |
| 01.01.00 | 31.03.00 | 1561.80 |
| 01.04.00 | 01.06.00 | 1669.40 |
| 02.06.00 | 31.12.00 | .. |

For excise tax rates after 2001, see the book tables.

Specifications

| | |
|----------|--------------------------|
| Quality: | Light diesel oil |
| Density: | 0.83 t/kl (assumed) |
| NCV: | 10 350 kcal/kg (assumed) |

Light fuel oil for households

From 2001 onwards, total price is made up of assessable value, sales tax (including a surcharge on sales tax) and a number of other charges, commissions and costs. Prior to 2001, prices refer to basic ceiling price (ex-storage point).

Sources: From 2001 onwards, Ministry of Petroleum & Natural Gas. Prior to 2001, Monthly Abstract of Statistics, Ministry of Statistics and Programme Implementation.

Specifications

| | |
|----------|-----------------------------|
| Quality: | Superior kerosene oil (SKO) |
| Density: | 0.828/kl (assumed) |

Automotive diesel oil

Total price is made up of assessable value, dealer commission, excise tax and sales tax (including a sales tax surcharge). From 1978 to 1981, prices refer to those of 1 January.

General tax (Sales tax)

| From | To | % |
|----------|----------|---------|
| Prior to | 31.03.88 | 10 |
| 01.04.88 | 30.03.89 | 12 |
| 01.04.89 | 30.03.91 | 14 |
| 01.04.91 | 30.09.94 | 20 |
| 01.10.94 | 31.12.00 | 21 |
| 01.01.01 | now | unknown |

Excise tax/Customs duty

| From | To | INR/ litre |
|----------|----------|---------------|
| 01.03.79 | 16.08.79 | 0.494 |
| 17.08.79 | 10.09.79 | 0.399 |
| 11.09.79 | 28.02.88 | 0.330 |
| 01.03.88 | 27.02.93 | 0.347 |
| 28.02.93 | 28.02.94 | 0.348 |
| 01.03.94 | 30.09.94 | 0.570 |
| 01.10.94 | 02.07.96 | 0.590 |
| 03.07.96 | 01.09.97 | 0.860 |
| 02.09.97 | 31.12.97 | 1.240 |
| 01.01.98 | 31.03.98 | 1.210 |
| 01.04.98 | 31.03.99 | 1.170 |
| 01.04.99 | 30.06.99 | 1.100 |
| 01.07.99 | 31.10.99 | 1.140 |
| 01.11.99 | 31.12.99 | 1.600 |
| 01.01.00 | 31.12.00 | 2.600 |

For excise tax rates after 2001, see the book tables.

Specifications

| | |
|----------|-----------------------|
| Quality: | High speed diesel oil |
| Density: | 0.82 t/kl |
| NCV: | 10 080 kcal/kg |

Gasoline

Total price is made up of assessable value, dealer commission, excise tax and sales tax (including a surcharge). From 1978 to 1981, prices refer to those of 1 January.

General tax (Sales tax)

| From | To | % |
|----------|----------|----|
| Prior to | 31.03.88 | 12 |
| 01.04.88 | 30.03.89 | 15 |
| 01.04.89 | 30.03.90 | 17 |

| From | To | % |
|----------|----------|---------|
| 01.04.90 | 30.09.94 | 20 |
| 01.10.94 | 31.12.00 | 21 |
| 01.01.01 | now | unknown |

Excise tax/Customs duty

| From | To | INR/ litre |
|----------|----------|---------------|
| 01.03.79 | 16.08.79 | 2.703 |
| 17.08.79 | 28.02.88 | 2.216 |
| 01.03.88 | 27.02.93 | 2.327 |
| 28.02.93 | 28.02.94 | 2.438 |
| 01.03.94 | 30.09.94 | 2.570 |
| 01.10.94 | 02.07.96 | 2.640 |
| 03.07.96 | 01.09.97 | 2.670 |
| 02.09.97 | 30.09.98 | 3.540 |
| 01.10.98 | 31.12.98 | 5.160 |
| 01.01.99 | 31.12.99 | 5.130 |
| 01.01.00 | 31.12.00 | 6.130 |

For excise tax rates after 2001, see the book tables.

Specifications

| | |
|-------------------|--|
| Grade and Octane: | Premium leaded 93 RON Leaded reg. 87 (1982 onwards) Leaded reg. 83 (prior to 1982) |
| Density: | 0.75 t/kl (assumed) |
| NCV: | 10 700 kcal/kg (assumed) |

Automotive LPG

Original prices per 14.2 kg cylinders are converted to litres.

Specifications

| | |
|----------|-----------|
| Density: | 0.54 kg/l |
|----------|-----------|

NATURAL GAS

Prices refer to natural gas off-shore (landfall point), and exclude royalties, taxes and all statutory levels.

Specifications (assumed)

| | |
|------|--|
| NCV: | 9 250 kcal/m ³ (10.758 kWh/m ³) |
|------|--|

Source: Ministry of Petroleum & Natural Gas.

COAL PRICES

Sources: For industry and electricity generation: Coal Controllers' Organisation, Kolkata. For households: Monthly Abstract of Statistics, Ministry of Statistics and Programme Implementation, New Delhi.

Steam Coal**Special Taxes***Stowing Excise Duty (SED)*

| From | To | INR/ tonne |
|----------|----------|---------------|
| 01.01.75 | 25.06.03 | 3.50 |
| 26.06.03 | now | 10.00 |

Royalties (INR/tonne)

| From | To | Industry | Electricity |
|----------|----------|----------|-------------|
| 12.02.81 | 31.07.91 | 6.50 | 4.30 |
| 01.08.91 | 10.10.94 | 120.00 | 45.00 |
| 11.10.94 | 16.08.02 | 135.00 | 70.00 |
| 07.08.02 | 31.07.07 | 165.00 | 85.00 |
| 01.08.07 | now | 216.00 | 124.50 |

Specifications*Industry*

Quality: Non-coking coal, grade B (run of mine, non-long flame) from Mugma Area of ECL (CIL)

NCV: 5 940 kcal/kg

Electricity generation

Quality: Non-coking coal, grade E (run of mine, non-long flame) from Rajmahal Area of ECL (CIL)

NCV: 4 560 kcal/kg

Households

Quality: Soft coke briquettes

NCV: 8 900 kcal/kg (useful heating value)

Coking coal**Special taxes***Stowing excise duty (SED)*

| From | To | INR/ tonne |
|----------|----------|---------------|
| 01.01.75 | 25.06.03 | 4.25 |
| 26.06.03 | now | 10.00 |

Royalties

| From | To | INR/ tonne |
|----------|----------|---------------|
| 12.02.81 | 31.07.91 | 7.00 |
| 01.08.91 | 10.10.94 | 150.00 |

| From | To | INR/ tonne |
|----------|----------|---------------|
| 11.10.94 | 16.08.02 | 195.00 |
| 07.08.02 | 31.07.07 | 250.00 |
| 01.08.07 | now | 326.50 |

Specifications

Quality: Steel grade II (run of mine), from collieries of BCCL (CIL) linked to washeries

NCV: 6 350 kcal/kg

Ash content: 15 - 18%

ELECTRICITY

Sources: For industry: Planning Commission, *Annual Report on the Working of State Electricity Boards and Electricity Departments*, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi. For households: *Monthly Abstract of Statistics*, Ministry of Statistics and Programme Implementation.

ENERGY PRICE INDICES

Source: Ministry of Statistics and Programme Implementation, New Delhi.

Oil products

Wholesale: Indices are calculated from 1981 onwards, and are based on a weighted average of petrol, kerosene, aviation turbine fuel, high speed diesel oil, light diesel oil, lubricants and liquefied petroleum gas.

Electricity

Wholesale: Electricity.

Coal

Wholesale: Weighted average of coking coal, coke and lignite.

INDONESIA

OIL PRODUCTS

Since 2005, the government of Indonesia has no longer subsidised oil products, with the exceptions of kerosene for household use, automotive diesel oil (ADO) and gasoline for transportation.

From 2003 onwards, prices refer to the standard retail price and in 2002 to the market price. Prior to 2002, oil product prices refer to the subsidised price.

Sources: Ministry of Energy and Mineral Resources. See individual products for exceptions.

High sulphur fuel oil

Specifications

| | |
|----------|-------------------------|
| Quality: | Fuel oil |
| Density: | 0.968 t/kl (assumed) |
| NCV: | 9 820 kcal/kg (assumed) |

Heavy fuel oil for electricity generation

Prices refer to average price of oil products used.

Source: PT PLN (national electricity company).

Light fuel oil

Specifications

| | |
|-------------------|-----------------------------|
| <i>Industry:</i> | |
| Quality: | Industrial diesel oil (IDO) |
| <i>Household:</i> | |
| Quality: | Kerosene (subsidised) |

Diesel

Specifications

| | |
|------------------------|--|
| <i>Commercial:</i> | |
| Quality: | Automotive diesel oil (non-subsidised) |
| <i>Non-commercial:</i> | |
| Quality: | Automotive diesel oil (subsidised) |

Sources: From 2009 onwards, Pertamina. From 1990 to 2008, Ministry of Energy and Mineral Resources. From 1984 to 1989, Asian Development Bank *Key Indicators of Developing Asian and Pacific Countries*. From 1980 to 1983, OPEC *Annual Statistical Bulletin*.

Gasoline

From 2006 onwards, prices refer to the UPMS III Region, an area of Indonesia which accounts for approximately

30% of Indonesian oil product consumption and includes the capital Jakarta.

Specifications

Regular unleaded 88 RON gasoline
Quality: Premium

Premium unleaded 95 RON gasoline
Quality: Pertamina Plus

Premium unleaded 92 RON gasoline
Quality: Pertamina

Sources: From 2003 onwards, Pertamina. From 1990 to 2000, Ministry of Energy and Mineral Resources. From 1984 to 1989, Asian Development Bank *Key Indicators of Developing Asian and Pacific Countries*. From 1980 to 1983, OPEC *Annual Statistical Bulletin*.

NATURAL GAS

Industry

Prices refer to city gas used by the fertiliser industry.

Source: Ministry for Energy and Mineral Resources.

Electricity generation

Specifications (assumed)

GCV: 9 750 kcal/m³ (11.339 kWh/m³)

Source: PT PLN (national electricity company).

Households

Prices refer to city gas delivered to households.

COAL

Industry

Prices refer to manufacturing industry codes 31-39.

Electricity generation

Prices refer to the annual consumption value per total annual volumes.

Specifications

NCV: 5 300 - 5 500 kcal/kg

Sources: From 2009 onwards, PT PLN. Until 2008, Ministry of Energy and Mineral Resources.

ELECTRICITY

Prices refer to average selling prices of Indonesia.

Sources: From 2009 onwards, PT PLN. Until 2008, Ministry for Energy and Mineral Resources.

KAZAKHSTAN

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry. Industrial enterprises only pay the difference between VAT calculated on their output, and VAT paid on their inputs, to the central budget.

| From | To | % |
|----------|----------|----|
| 01.01.93 | 30.06.01 | 20 |
| 01.07.01 | 31.12.03 | 16 |
| 01.01.04 | 31.12.06 | 15 |
| 01.01.07 | 31.12.07 | 14 |
| 01.01.08 | 31.12.08 | 13 |
| 01.01.09 | now | 12 |

Source: Agency of Statistics of the Republic of Kazakhstan.

OIL PRODUCTS

Heavy fuel oil

Prices shown are monthly averages. Prior to 1996, prices are end-of-year prices.

Specifications

| | |
|----------|---------------------|
| Quality: | Mazut |
| Density: | 0.96 t/kl (assumed) |

Light fuel oil

General tax (VAT): Applies to households. See general notes for Kazakhstan.

Specifications

| | |
|----------|---------------------|
| Density: | 0.83 t/kl (assumed) |
|----------|---------------------|

Gasoline

Prices shown are monthly averages. Prior to 1996, prices are end-of-year prices.

General tax (VAT): See general notes for Kazakhstan.

Excise tax: See excise tax column.

Specifications

| | |
|-------------------|--|
| Grade and Octane: | Premium unleaded 98 RON Premium unleaded 95/96 RON Regular unleaded 80 RON |
| Density: | 0.845 t/kl (assumed) |

NATURAL GAS

Prices shown are monthly averages.

Specifications

| | |
|------|--|
| GCV: | 9 320 kcal/m ³ (10.839 kWh/m ³) |
|------|--|

COAL

Steam coal for industry

Prices shown are monthly averages. Prior to 1996, prices are end-of-year prices.

Specifications

| | |
|------|-------------------------|
| GCV: | 4 807 kcal/kg (assumed) |
|------|-------------------------|

Steam coal for households

Prices shown are monthly averages.

Specifications

| | |
|------|-------------------------|
| GCV: | 6 173 kcal/kg (assumed) |
|------|-------------------------|

Coking coal

Prices shown are monthly averages. Prior to 1996, prices are end-of-year prices.

Specifications

| | |
|------|-------------------------|
| GCV: | 7 011 kcal/kg (assumed) |
|------|-------------------------|

ELECTRICITY

General tax (VAT): Applies to households. See general notes for Kazakhstan.

Excise tax

| From | To | KZT/ MWh |
|----------|----------|-------------|
| 01.01.98 | 31.12.06 | 30 |
| 01.01.07 | now | 0 |

From 1996 onwards, prices shown are monthly averages. Prior to 1996, prices are end-of-year prices.

ENERGY PRICE INDICES

Annual indices are calculated as a ratio of the price in December of each year to the price in December of the base year.

LATVIA

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

| From | To | % |
|----------|------------|----|
| 01.05.04 | 31.12.2008 | 18 |
| 01.01.09 | 31.12.2010 | 21 |
| 01.01.11 | now | 22 |

OIL PRODUCTS

Source: Prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Prices shown are the prices most frequently charged, based on a weighted average.

Heavy fuel oil

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year.

Excise tax: As shown in excise tax column.

Specifications:

High sulphur fuel oil

Sulphur content: > 1%

Light fuel oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration).

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Automotive diesel oil

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Automotive gas oil

Gasoline

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Leaded substitute gasoline

Quality: Lead substitute petrol

Unleaded premium 95 RON gasoline

Quality: Euro-super 95

Automotive LPG

Pump prices.

Excise tax: As shown in excise tax column.

ELECTRICITY

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ENERGY PRICE INDICES

Annual indices are 12-month averages. Quarterly indices refer to the three-month average.

Source: Eurostat, Harmonised Indices of Consumer Prices (HICP).

Oil products

Retail: HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Retail: HICP, electricity (cp0451).

Natural gas

Retail: HICP, gas (cp0452).

Coal

Retail: HICP, solid fuels (cp0454).

LITHUANIA

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

| From | To | % |
|----------|----------|----|
| 01.05.04 | 31.12.08 | 18 |
| 01.01.09 | 31.08.09 | 19 |
| 01.09.09 | now | 21 |

OIL PRODUCTS

Prices shown are the prices most frequently charged, based on a weighted average.

Source: Prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Heavy fuel oil

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year.

Excise tax: As shown in excise tax column.

Specifications:

High sulphur fuel oil

Sulphur content: > 1%

Low sulphur fuel oil

Sulphur content: ≤ 1%

Light fuel oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration).

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Automotive diesel oil

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Automotive gas oil

Gasoline

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Unleaded premium 95 RON gasoline

Quality: Euro-super 95

Automotive LPG

Pump prices.

NATURAL GAS

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008. Data are biannual, therefore, prices for 1Q and 2Q are the same, as are those for 3Q and 4Q.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ELECTRICITY

Prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008.

Source: Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*.

ENERGY PRICE INDICES

Annual indices are 12-month averages. Quarterly indices refer to the three-month average.

Source: Eurostat, Harmonised Indices of Consumer Prices (HICP).

Oil products

Retail: From 2006 onwards, weighted average of HICP, liquid fuels (cp0453) and HICP, fuels and lubricants for personal transport equipment (cp0722). Prior to 2006, HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Retail: HICP, electricity (cp0451).

Natural gas

Retail: HICP, gas (cp0452).

Coal

Retail: HICP, solid fuels (cp0454).

MALTA

GENERAL NOTES

Conversion to Euro: Prices and taxes prior to 1 January 2008, the date of entry into the Economic and Monetary Union (EMU), have been converted from Maltese Liri using the appropriate irrevocable conversion rate equal to 0.4293 Liri/Euro.

This methodology facilitates comparisons within a country over time and ensures that the historical evolution (*i.e.* growth rates) is preserved. However, pre-EMU Euro are a notional unit and are not normally suitable to form area aggregates or to carry out cross-country comparisons.

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

| From | To | % |
|----------|-----|----|
| 01.05.04 | now | 18 |

OIL PRODUCTS

Source: Prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Prices shown are the prices most frequently charged, based on a weighted average.

Heavy fuel oil

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year.

Excise tax: As shown in excise tax column.

Specifications:

High sulphur fuel oil

Sulphur content: > 1%

Light sulphur fuel oil

Sulphur content: < 1%

Light fuel oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration).

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Automotive diesel oil

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Automotive gas oil

Gasoline

Pump prices.

Excise tax: As shown in excise tax column.

Specifications:

Leaded substitute gasoline

Quality: Lead substitute petrol

Unleaded premium 95 RON gasoline

Quality: Euro-super 95

ENERGY PRICE INDICES

Annual indices are 12-month averages. Quarterly indices refer to the three-month average.

Source: Eurostat, Harmonised Indices of Consumer Prices (HICP).

Oil products

Retail: HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Retail: HICP, electricity (cp0451).

Natural gas

Retail: HICP, gas (cp0452).

PAKISTAN

GENERAL NOTES

General tax (GST):

| From | To | % |
|----------|----------|----|
| unknown | 30.06.08 | 15 |
| 01.07.08 | 30.06.10 | 16 |
| 01.07.10 | now | 17 |

VAT in Pakistan is called GST, the general sales tax.

Source: Prices published in the *Pakistan energy Yearbook*, various editions.

OIL PRODUCTS

Prices and tax breakdown were calculated from data published in the tables of the *Pakistan Energy Yearbook*.

The ex-tax price consists of the ex-refinery price, plus distribution margins, dealers' commission, inland freight margin and price differential claims.

Excise tax includes customs/excise duties and fixed development levies.

The value added tax amount shown in the tables is the GST. The VAT rate is calculated as the GST amount divided by sum of the ex-tax price and the excise tax.

Heavy fuel oil

Prices refer to deregulated furnace oil sales prices. From 3Q2005 onwards, prices refer to Ex-ZOT (Zulfiqarabad oil terminal) sales prices. From 3Q2003 to 2Q2005, prices are the averages of local refinery prices. Before 2Q2003, prices refer to the price of imported oil and include a 15% sales tax.

Light fuel oil

Prices refer to kerosene sales prices.

Automotive diesel oil

Prices refer to high speed diesel sales prices.

Gasoline

Prices refer to gasoline sales prices

NATURAL GAS

Industry

Prices refer to the consumer prices of general industry and are exclusive of GST.

ROMANIA

GENERAL NOTES

General tax (VAT): VAT is not included in prices and taxes shown for industry because it is refunded on purchases for commercial purposes.

| From | To | % |
|----------|----------|----|
| 01.01.00 | 06.01.10 | 19 |
| 07.01.10 | now | 24 |

Source: Unless specified otherwise, National Institute for Statistics, Romania.

OIL PRODUCTS

Heavy fuel oil

Delivered consumer prices for offtakes of less than 2 000 tonnes per month or less than 24 000 tonnes per year. Prices shown are the prices most frequently charged, based on a weighted average.

Specifications

Low sulphur fuel oil

Density: 0.99 t/kl (assumed)
Sulphur content: ≤ 1%

Source: From 1Q08 onwards, prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Light fuel oil

Delivered consumer prices for deliveries of 2 000 to 5 000 litres (for offtakes of less than 2 000 litres the industrial sector may be taken into consideration). Prices shown are the prices most frequently charged, based on a weighted average.

Excise tax: As shown in excise tax column.

Specifications:

Quality: Heating gas oil

Source: From 1Q08 onwards, prices published in the *Weekly Oil Bulletin*, DG Energy and Transport, European Commission.

Automotive diesel

Prices shown refer to the average of all consumer categories. From 1Q04 onwards, prices refer to Euro Diesel.

Specifications

Quality: Euro Type EN 590
Sulphur content: 350 mg/kg (maximum)

Gasoline

Specifications

Premium leaded 96/98 RON gasoline

Quality: Super plus

Premium unleaded 95 RON gasoline

Quality: Euro premium type EN228

COAL

Steam coal for households

Prices include VAT and refer to the weighted average price from electricity sales to the urban (57%) and rural (43%) residential sectors.

Specifications

Quality: Sorted lignite
GCV: 5 500 kcal/kg (assumed)

NATURAL GAS

Households and industry

From 3Q07 onwards prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008. Prior to 3Q07, prices shown are average prices for all consumers. Data are biannual, therefore, prices for 1Q and 2Q are the same, as are those for 3Q and 4Q.

Specifications (assumed)

GCV: 9 320 kcal/m³ (10.839 kWh/m³)

Sources: From 3Q07 onwards, Eurostat, *Energy Statistics: gas and electricity prices - new methodology from 2007 onwards*. Prior to 3Q07, National Institute for Statistics, Romania.

ELECTRICITY

From 3Q07 onwards prices refer to the weighted averages of tariffs given by Eurostat consumption bands. Tariffs are weighted by the annual consumption volumes for each band in 2008.

Sources: From 3Q07 onwards, Eurostat, *Energy Statistics: gas and electricity prices - new methodology*

from 2007 onwards. Prior to 3Q07, Romanian Electricity and Heat Regulatory Authority (ANRE).

ENERGY PRICE INDICES

The industrial production price indices refer only to products delivered to domestic market. Wholesale indices exclude VAT. The base year for these indices is 2005. Retail indices include VAT; the base year for these is 2005.

Sources: Wholesale: National Institute for Statistics, Romania. Retail: Eurostat Harmonised Indices of Consumer Prices (HICP).

Oil products

Wholesale: products of class 19.20 "Manufacture of refined petroleum products" (NACE Rev. 2).

Retail: Weighted average of HICP, liquid fuels (cp0453) and HICP, fuels and lubricants for personal transport equipment (cp0722).

Electricity

Wholesale: products of class 35.11 "Production of electric energy" (NACE Rev. 2).

Retail: HICP, electricity (cp0451).

Natural gas

Wholesale: products of class 06.20 "Extraction of natural gas" (NACE Rev. 2).

Retail: HICP, gas (cp0452).

Coal

Wholesale: products of class 05 "Mining of coal and lignite" (NACE Rev. 2).

Retail: HICP, solid fuels (cp0454).

RUSSIAN FEDERATION

GENERAL NOTES

General tax (VAT): Prior to 1992, there was no VAT in Russia. The Soviet state budget was financed through a turnover tax and through confiscatory income tax on above-norm profits.

| From | To | % |
|----------|----------|----|
| 01.01.92 | 31.12.92 | 28 |
| 01.01.93 | 31.12.93 | 20 |
| 01.01.94 | 31.12.94 | 23 |
| 01.01.95 | .. | 20 |

Average prices on products, before 1997 inclusive, are presented in thousand rubles. On 1 January 1998, the nominal value of Russian banknotes and the measure of prices were redenominated at a rate of one new ruble being equal to 1000 old rubles.

For some products and time periods prior to 2004, ex-tax prices refer to average producers' prices as shipped to the domestic Russian market, excluding value added tax, excises and other taxes not included into the prime cost, as well as excluding costs of transportation to the consumer. See below for details.

Sources: Unless otherwise specified, Federal State Statistics Service (Rosstat), which until 2004 was known as the State Committee of the Russian Federation on Statistics (Goskomstat of Russia).

OIL PRODUCTS

Special tax

Road users' Tax

| From | To | % Refinery/ ex-tax price |
|----------|----------|-----------------------------|
| Prior to | 31.12.93 | 25 |
| 01.01.99 | 31.12.00 | 2.5 |
| 01.01.01 | 31.12.02 | 1 |

Heavy fuel oil

Specifications

Quality: Mazut for fuel

From 2004 onwards, prices refer to the acquisition prices paid by industrial organisations. From 1995 to 2003, prices refer to producer prices for heating purposes for all the economy sectors. Quarterly prices are given to the end of the period.

Prior to 1995, prices represent deliveries to power stations and exclude VAT.

From 1990 to 1992, prices represent delivered prices, calculated as refinery price plus transportation costs. Transport costs are calculated according to freight tariff indices, which are published in *Vestnik Statistiki*.

Light fuel oil

Prices for industry are equal to the prices of automotive diesel fuel oil, less the amount of Road Tax.

Prices for households are equal to the industry prices plus VAT.

Specifications

Density: 0.84 t/kl (assumed)

Automotive diesel oil for households

From 1Q05 onwards, quarterly and yearly data are arithmetic averages of weekly data. Prices prior to 3Q02 were based on the monthly average of "Consumer Prices" for the Moscow region.

Sources: Prior to 3Q02, data published in *Infotek, Statistics Documents, Fakty*, Ministry of Energy.

Automotive diesel oil for industry

Prior to 2001, prices refer to end-quarter producer prices.

Prior to 1994, prices exclude VAT, but include the road tax.

Sources: From 2Q04 onwards, Russian Information Agency of the Fuel and Energy Complex. From 2001 to 1Q04, Ministry of Energy. Prior to 2001, Goskomstat, Department of Foreign States Statistics on International Co-operation.

Gasoline

From 1Q05 onwards, quarterly and yearly data are arithmetic averages of weekly data. From 1Q01 to 4Q04, quarterly and yearly data are weighted averages of monthly data. Before 1Q01, quarterly prices are for the end of the period and yearly prices are averages of the four quarters.

Specifications:

Density: 0.76 t/kl (assumed)

Unleaded premium 95 RON gasoline

Quality: AN-95

Octane: 95 RON and higher

Unleaded premium 92 RON gasoline

Quality: AN-92 and AN-93

Octane: 92 RON and 93 RON

Unleaded regular 76 RON gasoline

Quality: AN-76
Octane: 76 RON

Leaded premium 92 RON gasoline

Quality: A-92 and A-93
Octane: 92 RON and 93 RON

Leaded regular 76 RON gasoline

Quality: A-76
Octane: 76 RON

Sources: For unleaded gasoline: from 1Q05 onwards and from 1997 to 2000, Federal State Statistic Service (Rosstat); from 2001 to 2004, Ministry of Energy. For leaded gasoline: prior to 1Q04, *Infotek, Statistics Documents, Fakty*, Ministry of Energy.

From 1998 to 2000, leaded premium gasoline quarterly prices refer to averages of monthly "Consumer Prices" for the Moscow region. Leaded regular gasoline prices refer to end-quarter prices and annual figures are averages of the four quarters.

Prior to 1995, leaded gasoline prices refer to road vehicle use only, and represent the average prices for 76 RON and 93 RON gasolines (70% and 30% respectively). The price of 93 RON is 1.3 times higher than 76 RON.

From 1Q92 to 4Q94, leaded gasoline prices shown include the road tax, value added tax and gasoline station charges. Prior to 1Q92, the turnover tax is included in the total price shown.

NATURAL GAS

Prior to 1995, VAT is excluded from all prices shown except for households.

Industry

Average prices are presented in rubles per thousand cubic metres. From 2000 onwards, prices refer to the average prices of gas acquired by industrial organisations. From 1995 to 1999, prices refer to producer prices, including natural gas and associated gas, for all the economy sectors. Quarterly prices are given to the end of the period.

Specifications

GCV: 9 320 kcal/m³ (10.839 kWh/m³), 0°C and 760 mm pressure (assumed)

Sources: From 1995 onwards, Federal State Statistics Service (Rosstat). For 1993 only, power utilities' Economic Forecasting Institute of the Russian Academy of

Science. From October 1992 to December 1993, Goskomstat publications. From 1990 to September 1992, Government Decrees.

Electricity generation

Prices for natural gas for electricity generation show the maximum regulated price set by the Federal Energy Commission. The Regional Energy Commission may set its own maximum regulated price based on the federal rate.

Specification:

GCV: 8 974 kcal/m³ (assumed)

Source: Ministry of Energy.

Households

The total price paid by household consumers is established by administrators of the Russian regions and covers the regulated wholesale price for household consumers, a transportation tariff and a marketing and sales service fee. In some cases the total price may also cover a utilities or municipal maintenance fee.

Source: *Gazprom in Figures 2000-2004*, Gazprom.

COAL**Steam coal for industry**

From 2004 onwards, prices refer to the acquisition prices for industrial organisations. From 1995 until 2003, prices are producer prices for both the industry and electricity generating sectors. From 1997 prices refer to hard coal, while prior to 1997 prices referred to both hard coal and brown coal. Quarterly prices refer to end-period prices.

Coking coal for industry

From 2004 onwards, prices refer to the acquisition prices for industrial organisations. From 1995 onwards, quarterly prices refer to end-period producer prices.

Sources: Data published: *Statistical Yearbook of Russia*.

The following information pertains to data prior to 1994.

Coking coal is used mostly in the metallurgy industry. Prices shown are for washed coking coal (coal concentrate). Washed coking coal is more expensive than unwashed coking coal if all costs are included. However, prices paid by steel mills for washed coal do not cover all washing costs.

ELECTRICITY

Industry

From 2004 onwards, prices refer to the acquisition prices paid by industrial organisations. From 1995 onwards, prices refer to sale prices for industrial organisations (excluding VAT).

Sources: From 1995 onwards, Federal State Statistics Service (Rosstat). From 1990 to 1992, the Ministry of Fuel and Energy data. Data published: *Statistical Yearbook of Russia*.

The following information pertains to data prior to 1994.

Prices shown are delivered prices based on the average revenue per unit covering contracts with two-stage tariffs (customers with >750 kW, 1 000 kW prior to 1991), standing charge expressed in RUB/kWh and one-stage tariffs (all customers with less capacity).

In the Mosenergo area, 66% of industrial consumption is based on the two-stage tariff; 34% is on the one-stage tariff.

Households

Prices refer to the weighted average price from electricity sales to the residential sectors, with urban consumption 57% and rural 43%.

SINGAPORE

GENERAL NOTES

Energy products in Singapore are subject to excise duties and the Goods and Services Tax (GST).

Good and services tax (GST)

| From | To | % |
|----------|----------|---|
| 01.04.94 | 31.12.02 | 3 |
| 01.01.03 | 31.12.03 | 4 |
| 01.01.04 | 30.06.07 | 5 |
| 01.07.07 | now | 7 |

Sources: Unless otherwise specified, Statistics Singapore.

OIL PRODUCTS

The quarterly retail prices of gasoline and diesel are derived from monthly average prices net of regular discounts given to customers by all oil companies in Singapore at all service stations for the reference month. The yearly prices are computed based on monthly average prices.

Automotive diesel oil

Excise Tax

| From | To | SGD/litre |
|----------|-----|------------------|
| 01.01.98 | now | No longer levied |

Specifications

Grade: Ultra low sulphur diesel.

Gasoline

Prior to 3Q09, prices for premium unleaded 95 RON gasoline refer to a premium unleaded 98/95 RON gasoline mix.

Excise tax

| Petrol > 96 RON | | |
|------------------|----------|---|
| From | To | SGD/litre |
| 01.01.00 | 12.10.01 | 0.5 or 40% of ex-tax price, whichever was higher |
| 13/10/01 | 27.02.03 | 0.44 or 35% of ex-tax price, whichever was higher |
| 28.02.03 | now | 0.44 |
| Petrol 90-96 RON | | |
| From | To | SGD/litre |
| 01.01.00 | 12.10.01 | 0.47 or 40% of ex-tax price, whichever was higher |
| 13.10.01 | 27.02.03 | 0.41 or 35% of ex-tax price, whichever was higher |
| 28.02.03 | now | 0.41 |

Specifications

Grade and octane: Premium unleaded 98/95 RON
Regular unleaded 92 RON

Automotive LPG

Pump prices. Excise tax is not levied. Prices in litres have been converted from kilograms using an estimated conversion factor from the IEA secretariat.

NATURAL GAS

Prices are under commercial contracts and thus confidential.

COAL

Coal is not used in significant quantities in Singapore.

ELECTRICITY

The prices shown refer to total price, including all taxes. These are therefore different to the Singapore electricity ex-tax prices published in other international publications.

Source: Energy Market Authority, a statutory board under the Ministry of Trade and Industry, Singapore.

SOUTH AFRICA

GENERAL NOTES

Equalisation fund

The Equalisation fund levy is normally a fixed monetary levy, determined by the Minister of Minerals and Energy in concurrence with the Minister of Finance. The levy income is mainly utilised to equalise fuel prices. The levy is currently zero.

BFP ("Slate" mechanism)

The BFP is a function of daily spot price and ZAR/USD exchange rate movements. The monthly average of the net effect of these changes determines the actual BFP for the applicable month. Other domestic price elements may also change from time to time. The sum total of these changes inevitably influences the pump price.

Gasoline prices are adjusted on the first Wednesday of every month. Prices rise and fall in line with movements in the exchange rate and international product prices. The basic price is calculated on the basis of 100% of spot quoted product prices at three refineries in the Arab Gulf, the Mediterranean area and Singapore.

Source: Unless specified otherwise, Department of Energy (formally Minerals and Energy).

OIL PRODUCTS

High sulphur fuel oil

Specifications

Density: 0.984 t/kl (average)
NCV: 9 777 kcal/kg

Automotive diesel

A price breakdown on a commercial/non-commercial basis is not available. Therefore, prices have been differentiated based on sulphur content.

Commercial: 0.05% sulphur
Non-Commercial: 0.005% sulphur

General tax (Fuel tax)

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.01.87 | 31.03.88 | 0.247 |
| 01.04.88 | 31.08.88 | 0.180 |

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.09.88 | 15.01.89 | 0.199 |
| 16.01.89 | 30.06.90 | 0.289 |
| 01.07.90 | 24.03.91 | 0.314 |
| 25.03.91 | 22.08.91 | 0.334 |
| 23.08.91 | 20.03.92 | 0.414 |
| 21.03.92 | 01.04.93 | 0.474 |
| 02.04.93 | 04.04.95 | 0.534 |
| 05.04.95 | 02.05.95 | 0.544 |
| 03.05.95 | 02.04.96 | 0.554 |
| 03.04.96 | 02.07.96 | 0.616 |
| 03.07.96 | 04.02.97 | 0.626 |
| 05.02.97 | 01.04.97 | 0.636 |
| 02.04.97 | 31.03.98 | 0.661 |
| 01.04.98 | 04.04.00 | 0.761 |
| 05.04.00 | 03.04.01 | 0.791 |
| 04.04.01 | 01.04.03 | 0.810 |
| 02.04.03 | 06.04.04 | 0.850 |
| 07.04.04 | 05.04.05 | 0.950 |
| 06.04.05 | 04.04.06 | 1.000 |
| 05.04.06 | 03.04.07 | 1.000 |
| 04.04.07 | 01.04.08 | 1.050 |
| 02.04.08 | 31.03.09 | 1.110 |
| 01.04.09 | 06.04.10 | 1.350 |
| 07.04.10 | 31.03.11 | 1.525 |
| 01.04.11 | now | 1.625 |

Special taxes

Customs and excise tax

| From | To | ZAR/ litre |
|----------|-----|---------------|
| 01.01.87 | now | 0.04 |

Equalisation fund

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.07.87 | 31.03.88 | 0.057 |
| 01.04.88 | 31.10.88 | 0.067 |
| 01.11.88 | 16.02.94 | 0.070 |
| 17.02.94 | 02.04.96 | 0.080 |
| 03.04.96 | 02.07.96 | 0.050 |
| 03.07.96 | 04.02.97 | 0.040 |
| 05.02.97 | 01.04.97 | 0.030 |
| 02.04.97 | 06.10.98 | 0.005 |
| 07.10.98 | 31.01.00 | 0.080 |
| 02.02.00 | 31.12.02 | 0.000 |
| 01.01.03 | 28.02.03 | 0.100 |
| 01.03.03 | 31.05.03 | 0.000 |
| 01.06.03 | 30.06.03 | 0.100 |
| 01.07.03 | now | 0.000 |

Road accident fund (RAF)

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.09.88 | 30.06.90 | 0.021 |
| 01.07.90 | 31.10.90 | 0.019 |
| 01.11.90 | 31.03.92 | 0.022 |
| 01.04.92 | 01.04.93 | 0.038 |
| 02.04.93 | 06.08.96 | 0.058 |
| 07.08.96 | 04.11.97 | 0.068 |
| 05.11.97 | 03.02.98 | 0.088 |
| 04.02.98 | 03.07.01 | 0.103 |
| 04.07.01 | 02.04.02 | 0.165 |
| 03.04.02 | 01.04.03 | 0.185 |
| 02.04.03 | 06.04.04 | 0.215 |
| 07.04.04 | 05.04.05 | 0.265 |
| 06.04.05 | 04.04.06 | 0.315 |
| 05.04.06 | 03.04.07 | 0.365 |
| 04.04.07 | 01.04.08 | 0.415 |
| 02.04.08 | 31.03.09 | 0.465 |
| 01.04.09 | 06.04.10 | 0.640 |
| 07.04.10 | 31.03.11 | 0.720 |
| 01.04.11 | now | 0.800 |

Specifications

| | |
|------------------|----------------------|
| Density: | 0.839 t/kl (average) |
| Sulphur content: | 3% |
| NCV: | 10 302 kcal/kg |

Gasoline**General tax (Fuel tax)**

93 & 95 Unleaded and leaded

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.01.87 | 31.03.88 | 0.235 |
| 01.04.88 | 31.08.88 | 0.225 |
| 01.09.88 | 15.01.89 | 0.229 |
| 16.01.89 | 24.03.91 | 0.310 |
| 25.03.91 | 22.08.91 | 0.369 |
| 23.08.91 | 20.03.92 | 0.469 |
| 21.03.92 | 01.04.93 | 0.549 |
| 02.04.93 | 04.04.95 | 0.609 |
| 05.04.95 | 02.05.95 | 0.619 |
| 03.05.95 | 02.04.96 | 0.629 |
| 03.04.96 | 02.07.96 | 0.691 |
| 03.07.96 | 06.08.96 | 0.701 |
| 07.08.97 | 04.02.97 | 0.716 |
| 05.02.97 | 01.04.97 | 0.726 |
| 02.04.97 | 31.03.98 | 0.766 |
| 01.04.98 | 06.04.99 | 0.866 |
| 07.04.99 | 04.04.00 | 0.906 |
| 05.04.00 | 03.04.01 | 0.956 |
| 04.04.01 | 31.03.03 | 0.980 |
| 01.04.03 | 31.03.04 | 1.010 |

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.04.04 | 31.03.05 | 1.110 |
| 01.04.05 | 31.03.07 | 1.160 |
| 01.04.07 | 01.04.08 | 1.210 |
| 02.04.08 | 31.03.09 | 1.270 |
| 01.04.09 | 06.04.10 | 1.500 |
| 07.04.10 | 31.03.11 | 1.675 |
| 01.04.11 | now | 1.775 |

Special taxes*Customs and excise tax*

All grades

| From | To | ZAR/ litre |
|----------|-----|---------------|
| 01.01.87 | now | 0.04 |

Equalisation fund

All grades

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.04.88 | 31.08.88 | 0.067 |
| 01.09.88 | 16.02.94 | 0.070 |
| 17.02.94 | 17.06.94 | 0.130 |
| 18.06.94 | 02.04.96 | 0.094 |
| 03.04.96 | 02.07.96 | 0.064 |
| 03.07.96 | 04.02.97 | 0.054 |
| 05.02.97 | 01.04.97 | 0.044 |
| 02.04.97 | 06.10.98 | 0.004 |
| 07.10.98 | 31.01.00 | 0.080 |
| 02.02.00 | 31.12.02 | 0.000 |
| 01.01.03 | 28.02.03 | 0.002 |
| 01.03.03 | 31.05.03 | 0.000 |
| 01.06.03 | 30.06.03 | 0.100 |
| 01.07.03 | now | 0.000 |

Road accident fund (RAF)

All grades

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 01.07.90 | 11.11.90 | 0.034 |
| 12.11.90 | 31.03.92 | 0.040 |
| 01.04.92 | 01.04.93 | 0.060 |
| 02.04.93 | 06.08.96 | 0.090 |
| 07.08.96 | 04.11.97 | 0.105 |
| 05.11.97 | 03.02.98 | 0.125 |
| 04.02.98 | 03.04.01 | 0.145 |
| 04.04.01 | 02.04.02 | 0.165 |
| 03.04.02 | 01.04.03 | 0.185 |
| 02.04.03 | 06.04.04 | 0.215 |
| 07.04.04 | 05.04.05 | 0.265 |
| 06.04.05 | 04.04.06 | 0.315 |
| 05.04.06 | 03.04.07 | 0.465 |

| From | To | ZAR/ litre |
|----------|----------|---------------|
| 04.04.07 | 01.04.08 | 0.415 |
| 02.04.08 | 31.03.09 | 0.465 |
| 01.04.09 | 06.04.10 | 0.640 |
| 07.04.10 | 31.03.11 | 0.720 |
| 01.04.11 | now | 0.800 |

Specifications

| | |
|---------------|---|
| Grade/octane: | Prem. leaded 95 RON Regular leaded 93 RON Premium unleaded 95 RON |
| Density: | 0.723 t/kl (average) |
| NCV: | 10 730 kcal/kg |

NATURAL GAS**Specifications**

| | |
|----------|--------------------|
| Quality: | Sasol gas tariff A |
|----------|--------------------|

COAL***Steam coal for industry***

Price shown is the local coal price sold to industries.

Specifications

| | |
|----------|-----------------|
| Quality: | Bituminous coal |
| NCV: | 5 804 kcal/kg |

Steam coal for electricity generation

Price shown is weighted average cost of coal consumed by ESKOM for electricity generation.

Specifications

| | |
|----------|---------------------------|
| Quality: | Low-grade bituminous coal |
| NCV: | 4 801 kcal/kg |

Steam coal for households

Price shown is the local coal price of bituminous coal sold to merchant/domestic customers.

ELECTRICITY***Industry***

Prices shown are for direct sales by Eskom to industry.

Households

Prices do not include VAT and refer to direct sales by Eskom for domestic use and street lighting.

THAILAND

OIL PRODUCTS

Where available, prices shown are quarterly averages of weekly retail prices in Bangkok. When not available, prices are the quarterly average of monthly reference prices.

Excise tax: See excise tax column for amount. The excise tax shown consists of the ex-refinery excise and municipal taxes.

Special taxes

Municipal tax: The municipal tax is levied at approximately 10% of the excise revenue. Amounts are included with the excise tax.

Sources: From 3Q98 onwards, Energy Information Division, Energy Policy and Planning Bureau, Ministry of Energy. Prior to 2Q98, annual prices from *Oil and Thailand*, annual report.

High sulphur fuel oil

Specifications

| | |
|------------------|-----------------|
| Quality: | Fuel oil type 2 |
| Viscosity: | 1 500 |
| Density: | 0.990 t/kl |
| Sulphur content: | > 2.0% |
| NCV: | 9 405 kcal/l |

Low sulphur fuel oil

Specifications

| | |
|------------------|-----------------|
| Quality: | Fuel oil type 1 |
| Viscosity: | 600 |
| Density: | 0.985 t/kl |
| Sulphur content: | < 2% |
| NCV: | 9 405 kcal/l |

Light fuel oil for households

Specifications

| | |
|------------------|--------------|
| Quality: | Kerosene |
| Density: | 0.84 t/kl |
| Sulphur content: | 0.2% |
| NCV: | 8 250 kcal/l |

Automotive diesel oil for commercial use

Specifications

| | |
|------------------|------------------------|
| Quality: | High speed diesel, HSD |
| Density: | 0.87 t/kl |
| Sulphur content: | 0.05% |
| NCV: | 8 700 kcal/l |

Gasoline

Specifications (all grades)

| | |
|------------------|------------|
| Lead content: | 0.013 g/l |
| Sulphur content: | 0.1% |
| Density: | 0.72 t/kl |
| NCV: | 0.752 t/kl |

NATURAL GAS

Prices refer to the average import price for natural gas.

Specifications

| | |
|------|--|
| NCV: | 8 617 kcal/m ³ (10.022 kWh/m ³) |
|------|--|

Source: Ministry of Science, Technology and Environment, Department of Energy Promotion and Development, *Thailand Energy Situation*.

COAL

Steam coal for industry

Prices refer to the average import price for bituminous, anthracite, coke, briquettes, and other coal. Prior to 1993, prices shown are end-use prices.

Sources: From 1994 onwards, Ministry of Science, Technology and Environment, Department of Energy Promotion and Development, published in *Thailand Energy Situation*. Prior to 1993, *Energy Indicators of Developing Member Countries*, Asian Development Bank.

Specifications

| | |
|------|---------------|
| NCV: | 6 242 kcal/kg |
|------|---------------|

ELECTRICITY

Prices shown are the average unit price of electricity sold within and outside the MEA (Metropolitan Electricity Authority).

Source: Ministry of Science, Technology and Environment, Department of Energy Promotion and Development, *Electric Power in Thailand 2009*.