World on the Edge - Energy Data - Oil

World Oil Production, 1950-2009

GRAPH: World Oil Production, 1950-2009

Top 20 Oil Producing Countries, 2009

Oil Production in the United States, 1900-2009

GRAPH: Oil Production in the United States, 1900-2009

Top 20 Oil Consuming Countries, 2009

Oil Consumption in the United States, 1950-2010

GRAPH: Oil Consumption in the United States, 1950-2010

Oil Consumption in China, 1965-2009

GRAPH: Oil Consumption in China, 1965-2009
Oil Consumption in the European Union, 1965-2009

GRAPH: Oil Consumption in the European Union, 1965-2009

Top 20 Oil Importing Countries, 2009

World's 20 Largest Oil Discoveries

The Real Price of Gasoline, 2007 Update

Retail Gasoline Prices by Country: Subsidies and Taxation, 2008

Fossil Fuel Consumption Subsidies in Selected Countries by Fuel Type, 2009

A full listing of data for the entire book is on-line at: http://www.earth-policy.org/books/wote/wote data

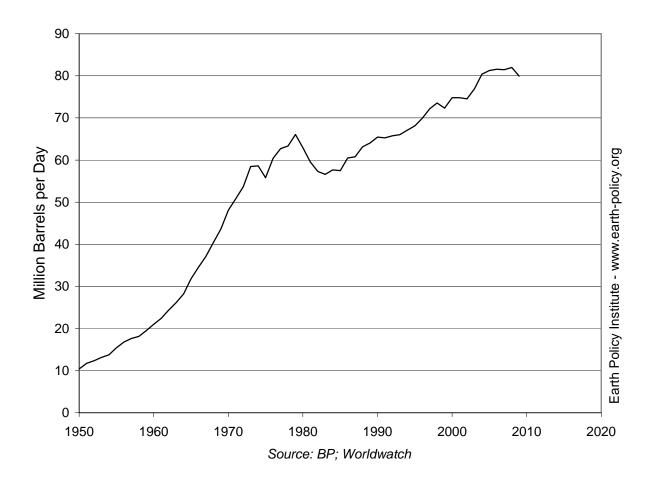
World Oil Production, 1950-2009

	,
Year	Production*
	Million Barrels per Day
4050	40.40
1950	10.42
1951 1952	11.73 12.34
1953	13.15
1954	13.74
1955	15.41
1956	16.78
1957	17.64
1958	18.10
1959	19.54
1960	21.03
1961	22.43
1962	24.33
1963	26.13
1964	28.25
1965	31.81
1966 1967	34.57 37.12
1968	40.44
1969	43.64
1970	48.06
1971	50.85
1972	53.67
1973	58.47
1974	58.62
1975	55.83
1976	60.41
1977	62.71
1978	63.33
1979	66.05
1980	62.95
1981	59.53
1982	57.30
1983 1984	56.60 57.69
1985	57.47
1986	60.46
1987	60.78
1988	63.15
1989	64.04
1990	65.46
1991	65.27
1992	65.77
1993	66.03
1994	67.10
1995	68.10
1996	69.90
1997	72.18
1998	73.54
1999	72.32
2000 2001	74.82 74.81
2001	74.53
2002	74.53 76.92
2003	80.37
2005	81.26
2006	81.56
2007	81.45
2008	81.99
2009	79.95
_	

^{*} Includes crude oil, shale oil, oil sands and natural gas liquids.

Source: 1950-1964 compiled by Worldwatch Institute from U.S. Department of Defense and U.S. Department of Energy data; 1965-2009 data from BP, Statistical Review of World Energy June 2010 (London: 2010).

World Oil Production, 1950-2009



Top 20 Oil Producing Countries, 2009

Country	Production*
	Million Barrels
	per Day
Russia	10.03
Saudi Arabia	9.71
United States	7.20
Iran	4.22
China	3.79
Canada	3.21
Mexico	2.98
United Arab Emirates	2.60
Iraq	2.48
Kuwait	2.48
Venezuela	2.44
Norway	2.34
Nigeria	2.06
Brazil	2.03
Algeria	1.81
Angola	1.78
Kazakhstan	1.68
Libya	1.65
United Kingdom	1.45
Qatar	1.34
World Total	79.95

^{*} Includes crude oil, shale oil, oil sands and natural gas liquids.

Source: BP, Statistical Review of World Energy June 2010 (London: 2010).

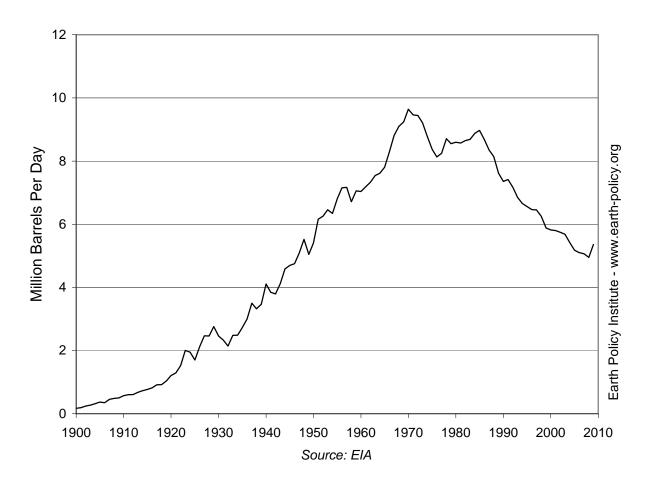
Oil Production in the United States, 1900-2009

Million Barrels per Day 1900 0.17 1901 0.19 1902 0.24 1903 0.28 1904 0.32 1905 0.37 1906 0.35
1901 0.19 1902 0.24 1903 0.28 1904 0.32 1905 0.37
1907 0.46 1908 0.49 1909 0.50 1910 0.57 1911 0.60 1912 0.61 1913 0.68 1914 0.73 1915 0.77 1916 0.82 1917 0.92 1918 0.92 1919 1.04 1920 1.21 1921 1.29 1922 1.53 1923 2.01 1924 1.95 1925 1.70 1926 2.11 1927 2.47 1928 2.46 1930 2.46 1931 2.33 1932 2.15 1933 2.48 1934 2.49 1935 2.72 1936 3.00 1937 3.50 1938 3.32 1939 3.46 1940
1958 6.71

^{*} Includes crude oil, shale oil, and oil sands. For the full list of included items, see U.S. Department of Energy (DOE), Energy Information Administration (EIA), "Petroleum Navigator: Definitions, Sources and Explanatory Notes," at www.eia.gov/dnav/pet/TblDefs/pet_cons_psup_tbldef2.asp.

Source: DOE, EIA, *Petroleum Navigator: Crude Oil Production*, electronic database, at www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm, updated 29 July 2010.

Oil Production in the United States, 1900-2009



Top 20 Oil Consuming Countries, 2009

Country	Consumption*
	Million Barrels
	per Day
United States	18.69
China	8.63
Japan	4.40
India	3.18
Russia	2.70
Saudi Arabia	2.61
Germany	2.42
Brazil	2.40
South Korea	2.33
Canada	2.20
Mexico	1.94
France	1.83
Iran	1.74
United Kingdom	1.61
Italy	1.58
Spain	1.49
Indonesia	1.34
Netherlands	1.05
Taiwan	1.01
Singapore	1.00
World Total	84.08

^{*} Includes ethanol and biodiesel.

Source: BP, Statistical Review of World Energy June 2010 (London: 2010).

Oil Consumption in the United States, 1950-2010

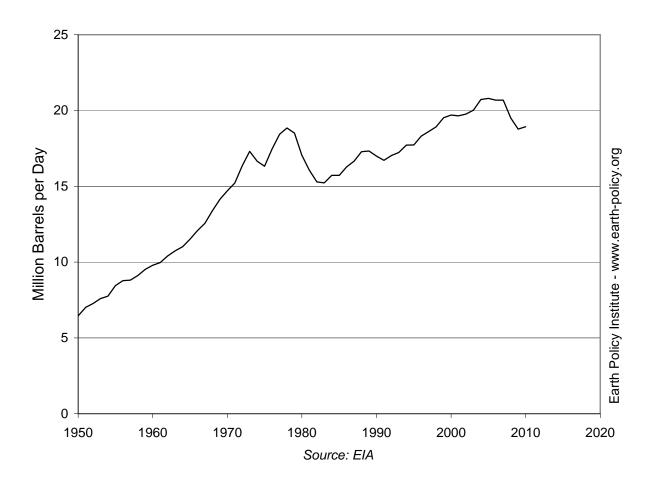
Year		Consumption*
		Million Barrels
		per Day
1950		6.46
1951		7.02
1952		7.27
1953		7.60
1954		7.76
1955		8.46
1956		8.78
1957		8.81
1958		9.12
1959 1960		9.53
1960		9.80 9.98
1961		10.40
1962		10.74
1964		11.02
1965		11.51
1966		12.08
1967		12.56
1968		13.39
1969		14.14
1970		14.70
1971		15.21
1972		16.37
1973		17.31
1974		16.65
1975		16.32
1976		17.46 18.43
1977 1978		18.43
1979		18.51
1980		17.06
1981		16.06
1982		15.30
1983		15.23
1984		15.73
1985		15.73
1986		16.28
1987		16.67
1988		17.28
1989		17.33
1990		16.99
1991 1992		16.71 17.03
1992		17.03
1994		17.72
1995		17.72
1996		18.31
1997		18.62
1998		18.92
1999		19.52
2000		19.70
2001		19.65
2002		19.76
2003		20.03
2004		20.73
2005		20.80
2006 2007		20.69
2007		20.68 19.50
2008		18.77
2010	**	18.93

^{*} Includes ethanol, distillate fuel oil, residual fuel oil, petrochemical feedstocks, asphalt, and other petroleum products. For the full list of included items, see U.S. Department of Energy (DOE), Energy Information Administration (EIA), "Petroleum Navigator: Definitions, Sources and Explanatory Notes," at www.eia.gov/dnav/pet/TbIDefs/pet_cons_psup_tbIdef2.asp.

Source: 1950-2005 from "Petroleum Products Supplied by Type, 1949-2008," Table 5.11 in DOE, EIA, "Annual Energy Review: Petroleum," at www.eia.doe.gov/aer/petro.html, updated 26 June 2009; 2006-2010 from DOE, EIA, "Short Term Energy Outlook," at www.eia.doe.gov/emeu/steo, updated 8 September 2010.

 $^{^{\}star\star}$ Consumption for 2010 is a projection.

Oil Consumption in the United States, 1950-2010



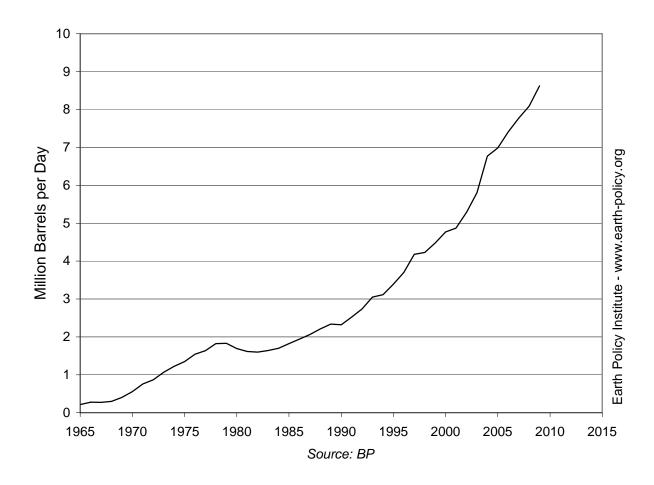
Oil Consumption in China, 1965-2009

Year	Consumption*		
	Million Barrels		
	per Day		
1065	0.22		
1965 1966	0.22 0.28		
1967	0.28		
1968	0.30		
1969	0.40		
1970	0.56		
1971	0.76		
1972	0.87		
1973	1.07		
1974	1.23		
1975	1.35		
1976	1.55		
1977	1.64		
1978	1.82		
1979	1.83		
1980	1.69		
1981	1.62		
1982	1.60		
1983	1.64		
1984	1.70		
1985	1.82		
1986	1.94		
1987	2.06		
1988	2.21		
1989	2.34		
1990	2.32		
1991	2.52		
1992	2.74		
1993 1994	3.05 3.12		
1994	3.39		
1996	3.70		
1997	4.18		
1998	4.23		
1999	4.48		
2000	4.77		
2001	4.87		
2002	5.29		
2003	5.80		
2004	6.77		
2005	6.98		
2006	7.41		
2007	7.77		
2008	8.09		
2009	8.63		

^{*} Includes ethanol and biodiesel.

Source: BP, Statistical Review of World Energy June 2010 (London: 2010).

Oil Consumption in China, 1965-2009



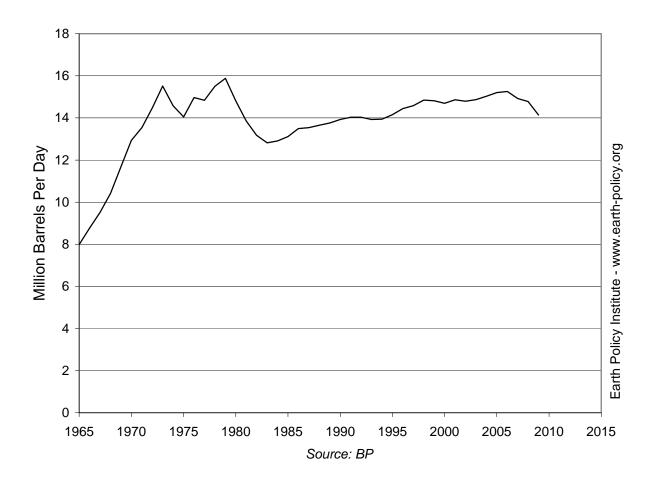
Oil Consumption in the European Union, 1965-2009

Year	Consumption*		
	Million Barrels per		
	Day		
1965	7.99		
1966	8.77		
1967	9.52		
1968	10.42		
1969	11.68		
1970	12.94		
1971	13.54		
1972	14.48		
1973	15.51		
1974	14.58		
1975	14.05		
1976	14.97		
1977	14.84 15.50		
1978 1979	15.88		
1980	14.81		
1981	13.86		
1982	13.17		
1983	12.82		
1984	12.91		
1985	13.11		
1986	13.50		
1987	13.54		
1988	13.65		
1989	13.76		
1990	13.93		
1991	14.03		
1992	14.04		
1993 1994	13.93 13.94		
1994	14.16		
1996	14.44		
1997	14.58		
1998	14.85		
1999	14.81		
2000	14.69		
2001	14.86		
2002	14.80		
2003	14.87		
2004	15.03		
2005	15.20		
2006	15.26		
2007	14.93		
2008	14.77		
2009	14.14		

^{*} Includes ethanol and biodiesel.

Source: BP, Statistical Review of World Energy June 2010 (London: 2010).

Oil Consumption in the European Union, 1965-2009



Top 20 Oil Importing Countries, 2009

Country	Imports*
	Million Barrels
	per Day
United States	9.01
China	3.88
Japan	3.44
India	2.62
South Korea	2.32
Germany	1.97
Italy	1.54
France	1.44
Spain	1.06
Netherlands	0.97
United Kingdom	0.96
Taiwan	0.95
Singapore	0.86
Canada	0.81
Thailand	0.79
Belgium	0.64
South Africa	0.44
Belarus	0.43
Poland	0.40
Australia	0.40
World Total	42.23

^{*} Includes crude oil, shale oil, and oil sands. For the full list of included items, see U.S. Department of Energy (DOE), Energy Information Administration (EIA), "International Energy Glossary," at www.eia.gov/emeu/iea/glossary.html#CrudeOil.

Source: U.S. Department of Energy, Energy Information Administration, *International Energy Statistics*, electronic database, at http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm, updated 31 October 2010.

World's 20 Largest Oil Discoveries

Field	Country	Discovery	Size of Field
			Billion Barrels
Bolivar Coastal	Venezuela	1917	14 - 30
Kirkuk	Iraq	1927	15 - 25
Gashsaran	Iran	1928	12 - 14
Greater Burgan	Kuwait	1938	32 - 75
Abqaiq	Saudi Arabia	1941	13 - 19
Ghawar	Saudi Arabia	1948	66 - 150
Romashkino	Russia	1948	17
Safaniya	Saudi Arabia	1951	21 - 55
Rumaila North & South	Iraq	1953	19 - 30
Manifa	Saudi Arabia	1957	11 - 23
Khurais	Saudi Arabia	1957	13 - 19
Ahwaz	Iran	1958	13 - 15
Daqing	China	1959	13 - 18
Samotlor	Russia	1961	28
Berri	Saudi Arabia	1964	10 - 25
Zakum	United Arab Emirates	1964	17 - 21
Zuluf	Saudi Arabia	1965	11 - 20
Shaybah	Saudi Arabia	1968	7 - 22
Cantarell	Mexico	1976	11 - 20
East Baghdad	Iraq	1979	11 - 19

Source: Fredrik Robelius, *Giant Oil Fields - The Highway to Oil* (Uppsala, Sweden: Uppsala University Press, 2007), p. 79.

The Real Price of Gasoline, 2007 Update

Average Indirect Costs per Gallon:

Cost	Lower Bound	Upper Bound	Lower Bound	Upper Bound
	Billion Nominal Dollars		Billion 2000 Dollars	
Climate Change	3.4	30.9	3.2	29.0
Supply and Protection Costs	78.2	158.4	73.5	148.9
2005 Energy Policy Act Subsidies	6.0	6.0	5.3	5.3
Depletion Allowance	0.8	1.0	0.8	1.0
Fuel Production Tax Credit	0.8	0.9	0.8	0.9
Expensing E&D Costs	0.2	0.3	0.2	0.3
Enhanced Oil Recovery Tax Credit	0.0	0.1	0.0	0.1
Foreign Tax Credit	1.1	3.4	1.2	3.6
Deferral of Foreign Income	0.2	0.3	0.2	0.3
Accelerated Depletion Allowance	1.0	4.5	1.0	4.7
Other Tax Credit	0.1	0.1	0.1	0.1
State and Local Taxes	4.9	5.1	5.2	5.4
Government Spending Subsidies	38.0	114.6	39.8	120.1
Air Pollution	29.3	542.4	30.7	568.5
Agricultural Crop Losses	2.1	4.2	2.2	4.4
Loss of Visibility	6.1	44.5	6.4	46.6
Damage to Buildings	1.2	9.6	1.3	10.1
Oil Spills	2.2	2.2	2.3	2.3
De-Icing and Runoff	2.0	5.2	2.1	5.4
Impervious Area Effect	4.2	29.4	4.4	30.8
Noise Pollution	6.0	12.0	6.3	12.6
Disposal of Cars	4.4	4.4	4.6	4.6
Social Cost of Sprawl	163.7	245.5	171.6	257.3
Barrier Effect of Motor Vehicles	11.7	23.4	12.3	24.5
Other Costs	191.4	474.1	200.6	496.9
Oil Costs (incl. supply protection, subsidies,				
government spending)	131.3	294.7	128.2	290.7
Gasoline Costs (climate change,				
health/environmental effects, social costs)	427.7	1,427.8	447.9	1,493.0
2006 Oil Consumption:	233 billion gallo	ons		
2006 Gasoline Consumption:	104 billion gallo	ons		
Total Costs per Gallon:	4.68	14.99	4.86	15.60

Source: Compiled by Earth Policy Institute using International Center for Technology Assessment (ICTA), *The Real Price of Gasoline*, Report No. 3 (Washington, DC: 1998), p. 34; ICTA, *Gasoline Cost Externalities*Associated with Global Climate Change: An Update to CTA's Real Price of Gasoline Report (Washington, DC: September 2004); ICTA, *Gasoline Cost Externalities: Security and Protection Services: An Update to CTA's Real Price of Gasoline Report* (Washington, DC: January 2005); Terry Tamminen, *Lives Per Gallon: The True Cost of Our Oil Addiction* (Washington, DC: Island Press, 2006), p. 60; with price deflators from Bureau for Economic Analysis, "Table 3 - Price Indices for Gross Domestic Product and Gross Domestic Purchases," *GDP and Other Major Series, 1929-2007* (Washington, DC: August 2007); oil consumption from BP, *BP Statistical Review of World Energy* (London: June 2007); and gasoline consumption from Energy Information Administration, "Total Crude Oil and Petroleum Products," at tonto.eia.doe.gov/dnav/pet/pet_cons_psup_dc_nus_mbbl_a.htm, updated 26 November 2007.

\$10.23 in 2000 dollars = \$11.92 in 2006 dollars

Retail Gasoline Prices by Country: Subsidies and Taxation, 2008

Subsidy Level	Country	Price of Gasoline
Very High Sub	sidies	U.S. Dollars / Gallon
	Venezuela	0.08
	Iran	0.38
	Libya	0.53
	Saudi Arabia Bahrain	0.61
	Turkmenistan	0.79 0.83
	Qatar	0.83
	Kuwait	0.91
<u>Subsidies</u>		
	Yemen	1.14
	Oman	1.17
	Algeria	1.29
	Trinidad and Tobago	1.36
	Brunei	1.44
	Burma (Myanmar) United Arab Emirates	1.63 1.70
	Egypt	1.85
	Indonesia	1.89
	Ecuador	1.93
	Angola	2.01
	Malaysia	2.01
<u>Taxation</u>		
	United States	2.12
	Nigeria	2.23
	Jordan	2.31
	Taiwan	2.42
	Sudan	2.46
	Panama Bolivia	2.54 2.57
	Belize	2.65
	Mexico	2.80
	Azerbaijan	2.80
	Jamaica	2.80
	Australia	2.80
	Lebanon	2.88
	Canada	2.88
	North Korea	2.88
	Liberia	2.91
	Argentina El Salvador	2.95 2.95
	Namibia	2.95
	Gambia	2.99
	Lesotho	2.99
	Vietnam	3.03
	Honduras	3.03
	Kyrgyzstan	3.03
	Republic of Congo	3.07
	Kazakhstan	3.14
	Pakistan	3.18
	Guyana	3.18

Syria	3.22
Guatemala	3.26
Swaziland	3.26
Thailand	3.29
Nicaragua	3.29
South Africa	3.29
Ukraine	3.33
Botswana	3.33
Russian Federation	3.37
Togo	3.37
Ghana	3.41
Philippines	3.44
Sierra Leone	3.44
Bhutan	3.44
Suriname	3.44
Laos	3.48
Ethiopia	3.48
Cambodia	3.56
Papua New Guinea	3.56
Chile	3.60
Tunisia	3.63
Niger	3.75
China	3.75
Barbados	3.79 3.86
Guinea Tajikistan	3.90
Benin	3.90
Colombia	3.94
Dominican Republic	3.94
Afghanistan	3.97
Singapore	4.05
Armenia	4.09
India	4.13
New Zealand	4.13
Georgia	4.13
Kosovo	4.16
Romania	4.20
Tanzania	4.20
Antigua and Barbuda	4.20
Somalia	4.24
Latvia	4.24
Nepal Bosnia and Herzegovina	4.28 4.28
Lithuania	4.28
Gabon	4.32
Cameroon	4.32
Fiji	4.35
Macedonia	4.35
Iceland	4.35
Haiti	4.39
Bangladesh	4.43
Paraguay	4.43
Uruguay	4.47
Slovenia	4.47
Estonia	4.47

	Moldova	4.54				
	Kenya	4.54				
	Timor-Leste	4.62				
Very High Taxation						
	Dem. Rep. of the Congo	4.66				
	Spain	4.66				
	Greece	4.66				
	Andorra Costa Rica	4.69 4.69				
	Brazil	4.77				
	Montenegro	4.81				
	Croatia	4.81				
	Hungary	4.81				
	Cyprus, South	4.85				
	Grenada	4.85				
	Bulgaria	4.85				
	Morocco	4.88				
	Serbia	4.88				
	Zimbabwe	4.92				
	Mali	4.92				
	Uganda	4.92				
	Chad Liechtenstein	4.92				
	Switzerland	4.92 4.92				
	Belarus	5.03				
	Cote d'Ivoire	5.03				
	Palestine (W. Bank and Gaza)	5.07				
	Uzbekistan	5.11				
	Senegal	5.11				
	Albania	5.15				
	Rwanda	5.19				
	Austria	5.19				
	Czech Republic	5.19				
	Israel	5.19				
	Burkina Faso	5.22				
	Mongolia	5.22				
	Sweden Burundi	5.22 5.26				
	Luxembourg	5.26 5.30				
	Peru	5.38				
	Japan	5.38				
	Sri Lanka	5.41				
	Poland	5.41				
	Central African Republic	5.45				
	United Kingdom	5.45				
	Mauritania	5.64				
	Belgium	5.68				
	South Korea	5.72				
	France	5.75				
	Denmark Madagasaar	5.83				
	Madagascar	5.87 5.01				
	Germany Ireland	5.91 5.91				
	Finland	5.94				
	Italy	5.94				
	Slovakia	5.94				

Franch Dalumania (Tabiti)	F 00
French Polynesia (Tahiti)	5.98
South Sudan	6.02
Portugal	6.09
Norway	6.17
Monaco	6.21
Malta	6.28
Cuba	6.32
Netherlands	6.36
Zambia	6.44
Mozambique	6.47
Malawi	6.74
Guadeloupe	6.85
Cape Verde	6.97
Turkey	7.08
Hong Kong	7.38
Eritrea	9.58

Notes: 1 Gallon = 3.785 Liters. Three benchmarks determine the classification of retail prices into levels of subsidies and taxation. The price of crude on the world market distinguishes those countries with very high subsidies from those with subsidies. The United States' retail prices are assumed to be an adequate approximation for the "international minimum benchmark for a non-subsidized road transport policy." Spain marks the boundary between taxation and very high taxation; of the EU-15 countries that pay VAT, fuel taxes, and other country-specific fees, Spain had the lowest fuel prices at the time of the analysis in 2008. The four categories, with costs per liter, are the following:

- 1. Very High Gasoline Subsidies (\$0.01-1.13/Gallon): these countries sell gasoline below the world market's price for crude oil (\$1.14/Gallon).
- 2. Gasoline Subsidies (\$1.14-2.11/Gallon): these countries sell gasoline above the price of crude but below the retail price in the United States.
- 3. Gasoline Taxation (\$2.12-4.65/Gallon): these countries sell gasoline at retail prices between that of the United States and that of Spain.
- 4. Very High Gasoline Taxation (\$4.66-9.58/Gallon): these countries sell gasoline at a retail price above that of Spain.

Source: Sebastian Ebert et al., *International Fuel Prices 2009* (Eschborn, Germany: GTZ Transport Policy Advisory Services, December 2009), p. 63, at www.gtz.de/en/themen/29957.htm.

Fossil Fuel Consumption Subsidies in Selected Countries by Fuel Type, 2009

	Iran	Russia	India	China	Indonesia
Total					
Subsidies (Billion Dollars)	66.4	33.6	21.1	18.6	12.2
per capita (Dollars)	895	238	18	14	53
as share of GDP (Percent)	20.1	2.7	1.7	0.4	2.3
Rate of Subsidization (Percent)	89	23	15	4	25
By Fuel					
Oil (Billion Dollars)	30.1	n/a	12.1	5.0	8.6
Rate of Subsidization (Percent)	88	n/a	18	3	28
Natural Gas (Billion Dollars)	24.8	18.7	2.7	0.5	n/a
Rate of Subsidization (Percent)	95	50	77	2	n/a
Coal (Billion Dollars)	n/a	n/a	n/a	4.3	n/a
Rate of Subsidization (Percent)	n/a	n/a	n/a	7	n/a
Electricity (Billion Dollars)	11.4	14.9	6.3	8.8	3.6
Rate of Subsidization (Percent)	82	27	12	4	31

Note: n/a indicates data that are unavailable. The five countries profiled are those selected and analyzed by the International Energy Agency; they have some of the largest fossil fuel subsidies but have plans to introduce market-based pricing gradually in the future. For a list of fossil fuel subsidies by fuel and country, see www.worldenergyoutlook.org/docs/weo2010/key_graphs.pdf.

Source: Compiled by Earth Policy Institute from International Energy Agency, *World Energy Outlook 2010* (Paris: 9 November 2010), pp. 598, 601, 605, 611, 614.